

# UNIVERSITY OF TORONTO



CALENDAR  
1925-1926





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1924-1925

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NOTE.—Communications relating to standing in all Faculties and Departments and to curricula, instruction and examinations in Law, Dentistry, Pharmacy, Agriculture, Gymnastics and Drill, and Veterinary Science are to be addressed to the Registrar of the University; correspondence regarding curricula, instruction and examinations in a particular Faculty is to be sent to the Secretary of that Faculty; correspondence regarding registration, curricula, instruction and examinations in Graduate Courses is to be sent to the Secretary of the School of Graduate Studies; enquiries with reference to College instruction and residence are to be addressed to the Registrar of the College concerned.

Applications for admission to the Faculties of Arts, Medicine, Applied Science and Engineering, and Forestry, are to be sent to the Registrar of the University; applications for admission to the Faculties of Education and Music are to be sent to the Secretary of the Faculty concerned.



# CALENDAR 1925-1926

- 1925—July 1 Wednesday Dominion Day. University Buildings closed.  
 July 2 Thursday Summer Session begins.  
 July 6 Monday . Summer Session in the Ontario College of Education commences.  
 July 9 Thursday . Meeting of the Finance and Executive Committee of Trinity College.  
 Aug. 1 Saturday Last day for receiving applications for the September Examinations in the Faculty of Arts.  
 Aug. 12 Wednesday. Summer Session closes  
 Aug. 13 Thursday.. Students of the Third Year, Dept. 1, in the Faculty of Applied Science and Engineering report at Summer Survey Camp.  
 Aug. 14 Friday. Summer Session in the Ontario College of Education closes.  
 Aug. 14 Friday. . . Last day for receiving applications for the Supplemental Examinations in the Faculties of Medicine and of Dentistry.  
 Aug. 20 Thursday... Students of the Third Year, Dept. 2, report at Summer Survey Camp.  
 Aug. 31 Monday . . Last day for receiving applications for admission to the Faculty of Dentistry for Session 1925-1926.  
 Sept. 1 Tuesday.... Last day for receiving applications for admission to the Faculty of Medicine for Session 1925-1926.  
 Sept. 1 Tuesday ... Last day for receiving applications for supplemental examinations in the Faculty of Applied Science and Engineering.  
 Sept. 1 Tuesday.... Supplemental Examinations in the Faculty of Arts begin.  
 Sept. 1 Tuesday. ... Beginning of preliminary month of practical work in the Department of Public Health Nursing for all who have not received credit for previous work.  
 Sept. 3 Thursday .. Meeting of the Finance and Executive Committee of Trinity College.  
 Sept. 7 Monday .... Labour Day. University Buildings closed.  
 Sept. 7 Monday ... Dental Infirmary reopens.  
 Sept. 8 Tuesday.... Supplemental Examinations in the Faculty of Medicine begin.  
 Sept. 8 Tuesday.... Students Fourth Year, Astronomy Option, Faculty of Applied Science and Engineering report at Summer Survey Camp.

- Sept. 14 Monday . . .Dental Nurses' Course. Registration in person at 9 a.m.
- Sept. 14-19 Monday-Saturday--Dental Practitioners' Course.
- Sept. 18 Friday. . . Meeting of the Council of the Faculty of Medicine.
- Sept. 21 Monday... Meeting of the Council of the Faculty of Dentistry.
- Sept. 21 Monday. . .Supplemental Examinations commence in the Faculty of Dentistry.
- Sept. 22 Tuesday ...Supplemental Examinations in the Faculty of Applied Science and Engineering begin.
- Sept. 26 Saturday . Enrolment in classes by the various Professors in the Faculty of Arts begins at 9 a.m.
- Sept. 28 Monday.. Meeting of the Council of the Faculty of Arts.
- Sept. 29 Tuesday....St. Michael's Day.
- Sept. 29 Tuesday.... Academic Year begins at 9 a.m.
- Sept. 29 Tuesday .. Last day for the completion of registration in person for the Session 1925-1926 in the Faculty of Arts.
- Sept. 29 Tuesday. . .Registration in person of the First Year in the Faculty of Applied Science and Engineering.
- Sept. 29 Tuesday. ...Enrolment in classes for the Session 1925-1926, in the Faculty of Arts, to be completed at 5 p.m.
- Sept. 29 Tuesday. . .Registration in the Faculty of Medicine by the Secretary of the Faculty.
- Sept. 29 Tuesday....Academic year in the Faculty of Dentistry begins at 8.30 a.m. Registration in person with the Secretary of the Faculty before 5 p.m.
- Sept. 30 Wednesday. Lectures begin at 9 a.m.
- Sept. 30 Wednesday. The opening address by the President to the students of all the Faculties at 3 p.m., in Convocation Hall.
- Sept. 30 Wednesday .Meeting of the Faculty of Arts of Victoria College.
- Sept. 30 Wednesday..Preliminary instruction to the first year and registration in person of the second, third and fourth years in the Faculty of Applied Science and Engineering.
- The Dean's address to the first year at 9.30 a.m. in the first year draughting room.

- Oct. 1 Thursday...Lectures and laboratory work commence at 9 a.m. in the Faculty of Applied Science and Engineering.
- Oct. 1 Thursday. ..Meeting of the Council of the Ontario College of Education.
- Oct. 2 Friday . . .Meeting of the Senate of Victoria College.
- Oct. 2 Friday. . . Meeting of University College Council.
- Oct. 2 Friday . . Meeting of Council of Faculty of Applied Science and Engineering.
- Oct. 2 Friday . . Meeting of the Council of the Faculty of Medicine.
- Oct. 3 Saturday... Stated meeting of the Caput to deal with requests as to social functions until November 15.
- Oct. 5 Monday... Meeting of the Council of the Faculty of Arts.
- Oct. 5 Monday....Meeting of the Council of the Faculty of Dentistry.
- Oct. 8 Thursday... Meeting of the Finance and Executive Committee of Trinity College.
- Oct. 9 Friday. ... Interfaculty Track Meet. Neither lectures nor laboratory classes given after 1 p.m.
- Oct. 9 Friday . . . Meeting of Senate.
- Oct. 12 Monday . . .Charter Day, Victoria College.
- Nov. 4 Wednesday. Meeting of the Faculty of Arts of Victoria College.
- Nov. 5 Thursday ...Meeting of the Finance and Executive Committee of Trinity College.
- Nov. 5 Thursday ..Meeting of the Council of the Ontario College of Education.
- Nov. 6 Friday.....Meeting of University College Council.
- Nov. 6 Friday. ... Meeting of the Senate of Victoria College.
- Nov. 6 Friday. ....Meeting of the Council of the Faculty of Applied Science and Engineering.
- Nov. 7-9 Saturday-Monday--Thanksgiving. Neither lectures nor laboratory classes given.
- Nov. 10 Tuesday.....Meeting of the Council of the Faculty of Arts.
- Nov. 13 Friday.....Meeting of Senate.
- Nov. 18 Wednesday..Annual General Business Meeting of the Convocation of Trinity College.
- Nov. 19 Thursday .. Annual General Meeting of the Corporation of Trinity College.
- Dec. 1 Tuesday.. ...Last day for receiving applications for supplemental examinations in the Faculty of Applied Science and Engineering and in the Faculty of Forestry.
- Dec. 2 Wednesday .Meeting of the Faculty of Arts of Victoria College.

- Dec. 3 Thursday....Meeting of the Finance and Executive Committee of Trinity College.
- Dec. 3 Thursday. ..Meeting of the Council of the Ontario College of Education.
- Dec. 4 Friday.....Meeting of the Council of the Faculty of Applied Science and Engineering.
- Dec. 4 Friday.....Meeting of University College Council.
- Dec. 4 Friday. ....Meeting of the Senate of Victoria College.
- Dec. 4 Friday.....Meeting of the Council of the Faculty of Medicine.
- Dec. 7 Monday. ...Meeting of the Council of the Faculty of Arts.
- Dec. 7 Monday.....Meeting of the Council of the Faculty of Dentistry.
- Dec. 11 Friday.... .Meeting of Senate.
- Dec. 16-22 Wednesday-Tuesday—Term Examinations.
- Dec. 22 Tuesday.....Last day of Lectures. Term ends at 5 p.m.
- Dec. 25 Friday... ..University Buildings closed.
- Dec. 30 Wednesday .Meeting of the Faculty of Arts of Victoria College.
- 1926—Jan. 1 Friday..... University Buildings closed.
- Jan. 4 Monday.... Mid-session Examinations commence in the Faculty of Applied Science and Engineering
- Jan. 4 Monday.... Meeting of the Council of the Faculty of Arts.
- Jan. 5 Tuesday... . Easter Term begins. Lectures commence at 9 a.m., except in the Faculty of Applied Science and Engineering.
- Jan. 5 Tuesday . ..Supplemental Examinations in the Faculty of Forestry commence.
- Jan. 6 Wednesday..Last day for handing in Fourth Year Theses in the Faculty of Applied Science and Engineering.
- Jan. 7 Thursday . Lectures and laboratory work commence at 9 a.m. in the Faculty of Applied Science and Engineering.
- Jan. 7 Thursday....Meeting of the Finance and Executive Committee of Trinity College.
- Jan. 7 Thursday....Meeting of the Council of the Ontario College of Education.
- Jan. 8 Friday.... .Meeting of University College Council.
- Jan. 8 Friday..... Meeting of the Council of the Faculty of Applied Science and Engineering.
- Jan. 8 Friday .....Meeting of Senate.
- Jan. 14 Thursday ...Inauguration Day, Trinity College.

- Feb. 3 Wednesday. Meeting of the Faculty of Arts of Victoria College.
- Feb. 4 Thursday .. Meeting of the Finance and Executive Committee of Trinity College.
- Feb. 4 Thursday .. Meeting of the Council of the Ontario College of Education.
- Feb. 5 Friday... .. Meeting of University College Council.
- Feb. 5 Friday.... Meeting of the Senate of Victoria College.
- Feb. 5 Friday . . Meeting of the Council of the Faculty of Medicine.
- Feb. 5 Friday .. Meeting of the Council of the Faculty of Applied Science and Engineering.
- Feb. 8 Monday... Meeting of the Council of the Faculty of Arts.
- Feb. 8 Monday... .. Meeting of the Council of the Faculty of Dentistry.
- Feb. 12 Friday.....Meeting of Senate.
- Feb. 17 Wednesday..Ash Wednesday.
- Mar. 1 Monday.....Last day for receiving applications for Annual Examinations in Arts and Law.
- Mar. 1 Monday.....Last day for receiving applications for supplemental examinations in Faculty of Applied Science and Engineering.
- Mar. 3 Wednesday..Meeting of the Faculty of Arts of Victoria College.
- Mar. 4 Thursday. Meeting of the Finance and Executive Committee of Trinity College.
- Mar. 4 Thursday. ..Meeting of the Council of the Ontario College of Education.
- Mar. 5 Friday... ..Meeting of University College Council.
- Mar. 5 Friday. ...Meeting of Senate of Victoria College.
- Mar. 5 Friday . ...Meeting of the Council of the Faculty of Applied Science and Engineering.
- Mar. 8 Monday.....Meeting of the Council of the Faculty of Arts.
- Mar. 12 Friday. ....Meeting of Senate.
- Mar. 15 Monday ...Last day for receiving applications for Annual Examinations in the Faculties of Medicine and Dentistry.
- Mar. 31 Wednesday..Last day for submitting LL.B. theses.
- Mar. 31 Wednesday..Meeting of the Faculty of Arts of Victoria College.
- Apr. 1-15 Thursday.Examinations in Department of Public Health Nursing.
- Apr. 1 Thursday. ..Meeting of the Senate of Victoria College.
- Apr. 1 Thursday....Meeting of the Council of the Faculty of Medicine.

- Apr. 1 Thursday Meeting of the Council of the Faculty of Applied Science and Engineering.
- Apr. 2-5 Friday-Monday—Easter Neither lectures nor laboratory classes given.
- Apr. 3 Saturday. . . Easter term ends in the Faculty of Applied Science and Engineering. Lectures and laboratory work end at 12 noon.
- Apr. 5 Monday. Meeting of the Council of the Faculty of Dentistry
- Apr. 6 Tuesday.. Meeting of the Council of the Faculty of Arts.
- Apr. 6 Tuesday .. Annual Examinations begin in the Faculty of Applied Science and Engineering.
- Apr. 8 Thursday ... Meeting of the Finance and Executive Committee of Trinity College.
- Apr. 9 Friday .... Meeting of University College Council.
- Apr. 9 Friday. .... Meeting of Senate.
- Apr. 15-June 15..... Period of intensive practical work in the Department of Public Health Nursing.
- Apr. 17 Saturday... Lectures in the Faculty of Forestry end.
- Apr. 19 Monday . . Examinations in the Faculty of Forestry begin.
- Apr. 26-30 Monday-Friday—Term Examinations in the Faculty of Arts.
- Apr. 30 Friday.. Lectures in Arts end.
- May 1 Saturday Annual Examinations in Arts, Law, Pharmacy, and Agriculture begin
- May 1 Saturday. Last day for receiving applications for the June Examinations in Arts
- May 5 Wednesday Meeting of the Faculty of Arts of Victoria College.
- May 6 Thursday... Meeting of the Finance and Executive Committee of Trinity College.
- May 7 Friday . Meeting of University College Council.
- May 7 Friday..... Meeting of the Senate of Victoria College.
- May 7 Friday... . Meeting of the Council of the Faculty of Applied Science and Engineering.
- May 8 Saturday .. Lectures and laboratory classes end at 12 30 p.m in the Faculty of Dentistry.
- May 10 Monday . . Meeting of the Council of the Faculty of Arts.
- May 10 Monday . Annual Examinations in the Faculties of Medicine and Dentistry commence.
- May 14 Friday . . . Meeting of Senate.
- May 15 Saturday.. Last day for receiving applications from candidates for Matriculation Scholarships.
- May 15 Saturday... Second Term, Faculty of Forestry ends.
- May 22 Saturday. Academic Year in Arts ends.

May 24 Monday ... University Buildings closed  
 May 29 Saturday... Medical Session ends.  
 May 31 Monday. . Meeting of the Council of the Faculty of  
    Dentistry  
 June 1 Tuesday .. Last day for receiving applications for  
    Fellowships  
 June 2 Wednesday Meeting of Senate.  
 June 2 Wednesday Meeting of the Faculty of Arts of Victoria  
    College.  
 June 3 Thursday Meeting of the Finance and Executive  
    Committee of Trinity College.  
 June 4 Friday University Commencement.  
 June 7 Monday Meeting of the Council of the Faculty of  
    Arts.  
 June 15 Tuesday . Senior Matriculation Examination begins.  
 June 18 Friday . Session closes at the Ontario College of  
    Education.

# UNIVERSITY OF TORONTO

1924-1925

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*Lecturer in Mechanical Engineering,*  
 492 Summerhill Avenue.
- M JOHN FAIR VAN EVERY, B.A.,  
*Special Lecturer in English Expression,*  
 13 Wells Street.
- M FULTON SCHUYLER VROOMAN, M.B.,  
*Demonstrator in Psychiatry,*  
 999 Queen Street West
- M HARDOLPH WASTENEYS, PH.D., COLUMBIA,  
*Special Lecturer in Science and Civilization,*  
 20 Howland Avenue.
- M WILLIAM VIRGIL WATSON, M.B.,  
*Senior Demonstrator in Therapeutics,*  
 86 Bloor Street West.
- SS ROBERT FRANCIS WIDDOWS, B.A.,  
*Lecturer in Social Service,*  
 64 Craighurst Avenue.
- MS HEALEY WILLAN, MUS. DOC.,  
*Lecturer in Theory of Music,*  
 139 Inglewood Drive.
- M HERBERT GEORGE WILLSON, B.A., M.D.,  
*Demonstrator in Anatomy,*  
 186 Spadina Road.
- M GEORGE EWART WILSON, M.B., F.R.C.S.,  
*Associate in Surgery and Clinical Surgery,*  
 205 Bloor Street East.
- A SIR BERTRAM COGHILL ALAN WINDLE, M.A., M.D., SC.D.,  
 DUBLIN, PH.D., ROME, LL.D., BIRMINGHAM, F.R.S.,  
*Lecturer in Ethnology, (U.)*  
 48 Roselawn Avenue.
- M DAVID EDMUND STAUNTON WISHART, B.A., M.B.,  
*Junior Demonstrator in Oto-Laryngology,*  
 47 Grosvenor Street.
- M OSWALD CHARLES JOSEPH WITHROW, M.B.,  
*Demonstrator in Histology and in Pathology,*  
 86 Bloor Street West.
- M JAMES HENRY WOOD, D.S.O., M.B.,  
*Junior Demonstrator in Clinical Surgery,*  
 1062 Dovercourt Road.

- A MISS GLADYS INGLESON WOOKEY, M.A.,  
*Lecturer in English, (C.)*  
68 Bloor Street West.
- M HAROLD WILLIAM WOOKEY, M.B., F.R.C.S.,  
*Junior Demonstrator in Clinical Surgery,*  
102 College Street.
- M ARTHUR BALDWIN WRIGHT, M.B.,  
*Demonstrator in Clinical Surgery,*  
52 Poplar Plains Road.
- SS CHARLES MELVILLE WRIGHT, B.A.,  
*Special Lecturer in Social Service,*  
557 Huron Street.
- A MISS JESSIE GERTRUDE WRIGHT, PH.D.,  
*Lecturer in Botany, (U.)*  
On leave of absence.
- M WALTER WALKER WRIGHT, M.B.,  
*Senior Demonstrator in Ophthalmology,*  
143 College Street.
- M GEORGE SILLS YOUNG, B.A., M.B.,  
*Associate in Medicine,*  
143 College Street.

# OTHER APPOINTMENTS

- M FRANK NATHANIEL ALLAN, M.B., B.Sc.,  
*Fellow in Physiology, (Part-time),*  
Toronto General Hospital.
- H MISS MARGARET ALLEN, B.Sc., LIVERPOOL,  
*Assistant in Food Chemistry,*  
329 Huron Street
- M MRS KATHLEEN DREW ALLIN, M.A.,  
*Fellow in Pathological Chemistry,*  
193 Dawlish Avenue.
- A LESLIE ROBERT ANGUS,  
*Class Assistant in Biology, (U.), Michaelmas Term,*  
42 Howland Avenue.
- A RALPH GEORGE ARCHIBALD, B.A., MAN., M.A., TOR.,  
*Fellow in Mathematics, (U)*  
93 Hayden Street.
- A COLIN BARNES, M.Sc., LEEDS,  
*Demonstrator in Physics, (U.)*  
30 Willcocks Street.
- A HARRY CLIFFORD BATES, M.A.,  
*Demonstrator and Research Assistant in Physics, (U.)*  
6 Mountview Avenue.



- M JOSEPH EDGAR BATES, B.A., McMASTER, M.B.,  
*Fellow in Pathology,*  
 358 Markham Street.
- R COLIN HAHNEMAN BAYLEY, B.A/Sc.,  
*Research Assistant in Chemical Engineering,*  
 92 Greensides Avenue.
- M PARKER McEWEN BAYNE, M.A.,  
*Class Assistant in Histology,*  
 55 Humewood Drive.
- A LOUIS AUGUSTE BIBET,  
*Instructor in French, (C.)*  
 47 Cecil Street.
- A NORMAN KIER BIGELOW, B.Sc., IOWA,  
*Assistant in Systematic Biology, (U.)*  
 158 Cumberland Street.
- A JOSEPH NORMAN BIRD, B.A.,  
*Class Assistant in Biology, (U.), Easter Term,*  
 65 Sussex Avenue.
- S ALBERT CRAWFORD BLUE, B.A.Sc.,  
*Demonstrator in Machine Design, Department of Mechanical Engineering,*  
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- M MISS HÉLÈNE BOLES, B.A.,  
*Research Assistant in Bacteriology,*  
 1 Willcocks Street.
- R HENRY BORSOOK, PH.D.,  
*Research Assistant in Biochemistry,*  
 246 Lippincott Street.
- R DONALD JAMES BOWIE, B.Sc., (MED.),  
*Research Assistant in Physiology,*  
 12A Gibson Avenue.
- A CHARLES CLINTON BROWN, PHMB., M.B.,  
*Class Assistant in Biology, (U.)*  
 1978 Dufferin Street.
- R FRANCIS BRUCE BROWN, B.Arch.,  
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 8 Powell Avenue.
- A GEORGE GORDON BROWN, B.A.,  
*Class Assistant in Psychology, (U.)*  
 486 Strathmore Boulevard.
- M MILTON HERBERT BROWN, M.B.,  
*Fellow in Pathology,*  
 142 St. George Street.

- S ROY JAMES BROWN, B.A.Sc.,  
*Demonstrator in Electrical Engineering,*  
380 Manning Avenue.
- M WILLIAM EASSON BROWN, M.B.,  
*Research Fellow in Therapeutics,*  
10 Carlton Street.
- S GEORGE FRASER BRYANT, B.A.Sc.,  
*Demonstrator in Electrical Engineering, (Easter Term),*  
North House, Victoria College.
- A MISS MARY C. W. BUFFAM, B.A.,  
*Assistant Demonstrator in Physics, (U.)*  
85 St. George Street.
- S THOMAS LORNE CAMPBELL, B.A.Sc.,  
*Demonstrator in Electrical Engineering,*  
931 College Street
- A MISS RUTH CARNAHAN, B.A.,  
*Assistant Demonstrator in Physics, (U.)*  
52 Regal Road.
- S KEITH L. CARRUTHERS, B.A.Sc.,  
*Demonstrator in Engineering Drawing,*  
603 Huron Street.
- M ISRAEL LYON CHAIKOFF, B.A.,  
*Fellow in Physiology,*  
200 Carlaw Avenue.
- R HAROLD JOSEPH ASHBRIDGE CHAMBERS, B.A.Sc.,  
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630 Pape Avenue
- R GORDON MURRAY CHUTE, B.A.Sc.,  
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508 Markham Street.
- S FREDERICK COATES,  
*Instructor in Modelling,*  
Scarborough Bluffs.
- A MISS ELIZABETH COHEN,  
*Assistant Demonstrator in Physics, (U)*  
85 St. Clair Avenue East
- A MISS FREDA COLE, M.A.,  
*Assistant in French, (C.)*  
103 Gloucester Street
- A ARTHUR KENDAL COLLEY, B.A.,  
*Class Assistant in Biology (U.)*  
56 Murray Street

- R CECIL WILLIAM COO, M.A.Sc.,  
*Research Assistant in Mining Engineering,*  
 185 Windermere Avenue.
- M WARING GERALD COSBIE, M.C., M.B.,  
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 159 Roxborough Street West.
- M WILLIAM ALFRED COSTAIN, M.B.,  
*Fellow in Surgery,*  
 134 Arlington Avenue.
- S WILLIAM RAE COWAN, B.A.Sc.,  
*Demonstrator in Thermodynamics,*  
 216 Cottingham Street
- A MISS KATHLEEN MAY CROSSLEY, B.A.,  
*Demonstrator in Physics, (U.)*  
 290 Huron Street.
- A MISS LOUISE EMMA CROW, B.A.,  
*Assistant Demonstrator in Physics, (U.),*  
 101 Gloucester Street.
- A JOHN CRYER, B.A.,  
*Assistant in Chemistry, (U)*  
 229 Carlton Street.
- A GRANT DOOKS DARKER, B.A.,  
 R *Assistant in Botany, (U)*  
 68 Kennedy Avenue.
- M JAMES ARNOLD DAUPHINEE, M.A., BRITISH COLUMBIA, TOR.,  
 R *Fellow in Bio-Chemistry,*  
 300 Huron Street.
- S ALEXANDER LINTON DAVIDSON, Ph.C.,  
*Demonstrator in Chemical Engineering,*  
 109 Balsam Avenue
- M GEORGE ALBERT DAVIS, B.A., M.B.,  
*Research Fellow in Paediatrics,*  
 12 Belsize Drive.
- S ANTOINE VALENTINE DELAPORTE, B.A. Sc.,  
*Instructor in Sanitary Chemistry, (Part-time),*  
 189 Robert Street.
- A MISS MARGARET EVELYN DEPEW, B.A.,  
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- R HAROLD MARSHALL DILWORTH, M.A.Sc.,  
*Demonstrator in Chemical Engineering,*  
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R *Instructor in Engineering Drawing, and Research Assistant in Civil Engineering,*  
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85 St. George Street.
- S GEORGE FREDERICK EVANS, B.A.Sc.,  
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83 Madison Avenue.
- S MEYLER GWYN EVANS, B.A.Sc.,  
*Demonstrator in Hydraulics,*  
174 Howland Avenue.
- M STEPHEN JEMMOT EVELYN, M.B.,  
*Demonstrator in Histology,*  
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- M WILBUR ROUNDING FRANKS, B.A.,  
*Fellow in Physiology,*  
142 St. George Street.
- M MISS CHRISTINA JANE FRASER, M.A.,  
R *Demonstrator in Bacteriology, and Assistant in Dental Research,*  
218 Cottingham Street.
- A MISS CLARA WINIFRED FRITZ, B.A., M.Sc., MCGILL,  
R *Instructor in Botany, (U.), and Research Assistant in Botany,*  
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- A MISS MADELEINE ALBERTA FRITZ, B.A., MCGILL. M.A.,  
*Class Assistant in Geology, (U.)*  
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- A JAMES DAVIS GARRARD, B.A., OXON.,  
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 Chemistry Building.
- M WILLIAM FINDLAY GEDDES, B.S.A.,  
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 South House, Victoria College.
- R ALBERT HALDANE GEE, M.A.,  
*Research Assistant in Zymology,*  
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 22 Lytton Boulevard.
- A ANDREW ROBERTSON GORDON, M.A.,  
*Assistant in Electro-Chemistry, (U.)*  
 40 Heath Street West.
- M ARTHUR MELVILLE GOULDING, B.A., M.D., HARVARD,  
*Fellow in Bio-Chemistry,*  
 Dentonia Park, East Toronto.
- M ROBERT WELLINGTON GRAHAM, M.B.,  
*Fellow in Pharmacology,*  
 184 Oakwood Avenue
- S EDWARD ROCKFORT GRANGE, B.A.Sc.,  
*Demonstrator in Engineering Drawing,*  
 34 Chicora Avenue.
- S WILFRED JOHN GRANT, B.A.Sc.,  
*Demonstrator in Chemical Engineering,*  
 83 Quebec Avenue.
- M JOHN C. HALLAMORE, PHM.B.,  
*Assistant in Pharmacy,*  
 455 Shaw Street.
- A CHARLES SAMUEL HANES,  
*Assistant in Botany, (U.)*  
 278 Keewatin Avenue.
- A HENRY GORDON HANLEY,  
*Assistant in Astronomy, (U.)*  
 North House, Victoria College.
- A JOHN LAWSON HART,  
*Assistant in Biology, (U) (Easter Term).*  
 43 Indian Road Crescent.
- R MALCOLM ALMERIC HAUGHTON,  
*Research Assistant in Metallurgical Engineering,*  
 37 Cardiff Road.
- R MISS DAISY DENSIAM HEARN,  
*Research Assistant in Psychology,*  
 249 Dovercourt Road.

- R MISS NELLIE RUTH HEARN,  
*Research Assistant in Physiology,*  
249 Dovercourt Road.
- M JOHN HEPBURN, M.B.,  
*Fellow in Physiology, (Part-time),*  
136 Tyrrell Avenue
- A HAGAR HETHRINGTON,  
*Class Assistant in Biology, (U.) Michaelmas Term,*  
297 Indian Road.
- F ROBERT CHRISTIE HOSIE, B.Sc.F.,  
*Assistant in Forestry,*  
Tudor Apts., Sherbourne Street.
- S HAROLD EDWIN HOWDEN, B.A.Sc.,  
*Demonstrator in Electrical Engineering, (Michaelmas Term),*  
575A Spadina Avenue.
- S FRANCIS WILLIAM HUGGINS, B.A.Sc.,  
*Demonstrator in Mining Engineering,*  
36 Garnock Avenue.
- S CHESTER ARTHUR HUGHES, M.M., M.A.Sc.,  
*Instructor in Civil Engineering,*  
Mimico Beach.
- A HOWARD RUTHVEN HUGILL, B.A.,  
*Assistant in Electro-Chemistry, (U.)*  
31 Highview Crescent.
- A HENRY JOHN CUNNINGHAM IRETON, M.A.,  
R *Demonstrator and Research Assistant in Physics, (U.),*  
24 Wilcocks Street.
- S KENNETH BELL JACKSON, B.A.Sc.,  
R *Instructor in Engineering Physics and Photography*  
*and Research Assistant in Engineering Physics,*  
South House, University of Toronto.
- A WALTER ERASTUS JACKSON, M.A.,  
*Demonstrator in Astronomy, (U.)*  
195 Cotingham Street.
- S CHARLES WILLIAM JEFFERYS,  
*Instructor in Frechand Drawing, (Part-time),*  
York Mills.
- M EDWARD JEFFREY, M.B.,  
*Assistant Demonstrator in Clinical Microscopy,*  
107 Carlton Street.
- A CLARENCE MANSELL JEPHCOTT, M.A.,  
*Assistant in Chemistry, (U)*  
91 St George Street

- S PERCY VANDELEUR JERMYN, B.A. Sc.,  
*Demonstrator in Engineering Drawing,*  
 109 Collier Street.
- R ISLWYN WYN JONES, B.A., B.Sc., ALBERTA,  
*Research Assistant in Geology,*  
 71 Charles Street West
- A SHERWIN FINCH KELLY, B.Sc., KANSAS,  
*Class Assistant in Geology, (U)*  
 8 Russell Street.
- R MISS FLORENCE B. KELSEY,  
*Research Assistant in Medical Research,*  
 Toronto General Hospital.
- M WILLIAM STRATHEARN KEITH, B.A.,  
*Fellow in Physiology,*  
 3122 Yonge Street
- A DOUGLAS KERR-LAWSON, B.A.,  
*Demonstrator in Mineralogy, (U.),*  
 99 Bedford Road
- A OSCAR CARL HILL KITCHING, B.A.,  
*Assistant in Chemistry, (U.)*  
 North House, Victoria College.
- A MISS CYPRA KRIEGER, B.A.,  
*Fellow in Mathematics, (U.)*  
 327 Palmerston Boulevard.
- A MISS JANET CARLYLE LAING, B.A.,  
*Instructor in French, (C)*  
 39 MacFarland Avenue.
- M ROSS STANLEY LANG, M.A., M.B.,  
*Fellow in Medicine and Part-time Fellow in Physiology,*  
 Toronto General Hospital.
- R GEORGE BURWASH LANGFORD, B.A.Sc.,  
*Research Assistant in Palaeontology,*  
 82 St. Mary's Street.
- A MISS CECILE LE PREVOST,  
*Special Instructor in French, (C.)*  
 87 Millwood Road
- H MISS HARRIET LEWIS, B.S., WISCONSIN,  
*Instructor in Household Science,*  
 64 Avenue Road.
- A MELVIN JAMES LIGGETT,  
*Assistant Demonstrator in Physics, (U)*  
 North House, Knox College.
- M HUGH DAVID LOGAN, M.B.,  
*Fellow in Physiology, (Part-time),*  
 142 St. George Street.

- R GEORGE HERBERT WILLIAM LUCAS, PH.D.,  
*Biochemical Assistant to Chair of Medical Research,*  
8 Grimthorpe Road.
- S JAMES S. EDISON MACALLISTER, B.A.Sc.,  
R *Demonstrator in Hydraulics and Research Assistant*  
*in Mechanical Engineering,*  
22 Mountview Avenue.
- S ROBERT HENRY MCCABE, B.A.Sc.,  
*Demonstrator in Electrical Engineering,*  
30 Ross Street.
- M NORMAN ARNOLD MCCORMICK, M.A.,  
R *Fellow in Physiology (Part-time), and Research As-*  
*stant in Physiology,*  
South House, University of Toronto.
- A ALBERT ERNEST MCCULLOCH, B.A., M.B.,  
*Class Assistant in Biology, (U.)*  
166 St. Clair Avenue West.
- M ALEXANDER EDWARD MACDONALD, M.B.,  
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151 Bloor Street West
- M JAMES ALEXANDER MACDONALD, PHM.B.,  
*Class Assistant in Pharmacy,*  
34 Hogarth Avenue.
- M MISS JENNIE MCFARLANE, M.A.,  
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Apt 16, 2 Spadina Road.
- M JOSEPH ARTHUR MACFARLANE, B.A., SASK., M.B.,  
*Fellow in Surgery,*  
Toronto General Hospital.
- S RONALD JAMES McGRATH, B.A.Sc.,  
*Demonstrator in Engineering Physics,*  
58 Triller Avenue
- SS MISS AGNES CHRISTINE MCGREGOR,  
*Director of Field Work,*  
Apt 5, 82 St. Albans Street
- M HECTOR HUGH MACKAY, B.A.,  
*Class Assistant in Embryology, Michaelmas Term,*  
312 Robert Street.
- A LOUIS ALEXANDER MACKAY, M.A.,  
*Fellow in Latin, (V.)*  
Gate House, Victoria College.
- M HUGH ALEXANDER MACKECHNIE, B.A., BRITISH COLUMBIA,  
*Fellow in Bio-Chemistry,*  
19 Russell Street



- A LORNE MILTON MCKENZIE, B.A.,  
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 Centre House, Knox College.
- R ROLAND RUSK McLAUGHLIN, M.A.Sc.,  
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 4 May Street
- A MISS BERTHA L. MACNAMARA, B.A.,  
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 208 High Park Avenue.
- S JOHN GRAHAM McNIVEN, M.A.Sc.,  
 R *Demonstrator in Mining Engineering and Research*  
*Assistant in Mining Engineering, (Easter Term).*  
 428 Brunswick Avenue.
- S PAUL L. McVICKER, B.A.Sc.,  
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- S WILFRED HAROLD MACKLIN, B.A.Sc.,  
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- M MISS MARION MAITLAND, B.A.,  
*Class Assistant in Hygiene,*  
 18 Tranby Avenue.
- R J MARKOWITZ, M.B.,  
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 226 Chnton Street
- S ALVAN SHERLOCK MATHERS, B.A.Sc.,  
*Special Instructor in Architecture,*  
 34 Highview Crescent.
- M DONALD MURRAY MEEKISON, M.B.,  
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 142 Bloor Street West
- M PETER JOSEPH MOLONEY, PH.D.,  
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 872 Manning Avenue.
- M JOSEPH ALAN MORRELL, PH.D.,  
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 404 Dupont Street.
- A EZRA HENRY MOSS, M.A.,  
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*Botany,*  
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- M MISS KATHLEEN MULDOON, PHM.B.,  
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- R MAURICE JOSEPH MULLIGAN, M.A.,  
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 28 St. Joseph Street.
- R CHARLES DAVID NIVEN, M.A., B.Sc., ABERDEEN,  
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 273 Sherbourne Street.
- R EDWARD CLARK NOBLE, B.A.,  
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- H MISS JEAN PANTON, M.A.,  
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 101 Gloucester Street.
- H MISS EDNA WILHELMINE PARK, M.A.,  
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 25 Grosvenor Street.
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- S JAMES WALLER REBBECK, B.Sc., BRITISH COLUMBIA, M.A.,  
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 24 Willcocks Street.
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 85 St. George Street.
- A HAROLD COLMAN RICKABY, M.A.  
*Research Assistant in Mineralogy, (U.)*  
 Hart House, University of Toronto.
- R MISS JESSIE HAMILTON RIDOUT, M.A.,  
*Assistant in the Banting-Best Research,*  
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- R CLIFFORD GEORGE RILEY, B.S.A.,  
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- E MISS ALICIA ENID ROBERTSON,  
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- M ALBERT HILL ROLPH, B.A., M.B.,  
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 Hospital for Sick Children.
- S ROGER EARL ROSSITER, B.A.Sc.,  
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- A REV EDWARD LEONARD RUSH, B.A., WESTERN,  
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 St. Michael's College.
- R NORMAN EMRYS RUSSELL, B.A.Sc.,  
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- S WILLIAM LISTER SAGAR, B.A.Sc.,  
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- A MISS LAILA CORDELIA SCOTT, M.A.,  
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 13 Admiral Road.
- R WILLIAM CLIFFORD MUNROE SCOTT,  
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 17 Grange Road.
- M NOBLE CARMAN SHARPE, B.A., M.B.,  
*Assistant in Pharmacology,*  
 2741 Yonge Street.
- A ALLEN GOODRICH SHENSTONE, B.S., PH.D., PRINCETON, B.A.,  
 CANTAB.,  
*Demonstrator in Physics, (U.)*  
 3 LaPlaza Apts, Charles St. E.
- M JOHN WILLIAM SHIER, B.A., BRITISH COLUMBIA,  
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- S JOSEPH ERIC BENJAMIN SHORTT, B.A.Sc.,  
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 401 Quebec Avenue.
- R GORDON MERRITT SHRUM, PH.D.,  
*Research Assistant in Physics (Easter Term),*  
 Middle House, Victoria College.
- R MISS WINIFRED SIMPSON, B.A.,  
*Research Assistant in Pathology,*

Thornhill.

- R W. WESLEY SIMPSON, B.A., BRITISH COLUMBIA,  
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225 Heath Street West.
- R VICTOR GEORGE SMITH, B.A.Sc.,  
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- M ANDREW COPELAND TAYLOR, B.A.,  
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- A ROBERT THOMSON, B.A.,  
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43 Wellesley Street.
- A ALFRED EDWIN TILBY,  
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657 Spadina Avenue.

- R MISS MARY ISABEL TOM, B.A., M.B.,  
*Research Assistant in Anatomy,*  
 101 Gloucester Street.
- M HERMON BROOKFIELD VAN WYCK, B.A., M.B.,  
*Junior Fellow in Obstetrics and Gynaecology,*  
 280 Danforth Avenue.
- A MISS MARY EVELYN GERTRUDE WADDELL, M.A.,  
*Instructor in Mathematics, (U.)*  
 72 Madison Avenue
- A ANSON ROBERTSON WALKER, B.A., QUEEN'S, M.A.,  
 R *Instructor in Botany, (U.), and Research Assistant in*  
*Botany,*  
 20 Gibson Avenue.
- A ROBERT BRUCE WALKER, B.A.,  
*Assistant in Electro-Chemistry, (U.)*  
 65 Clinton Street.
- A PAUL ANTHONY WILSON WALLACE, M.A.,  
*Instructor in English, (C.)*  
 41 Hillsdale Avenue West.
- R FRED WELLS WATSON,  
*Research Assistant in Mechanical Engineering,*  
 587 Markham Street.
- A WADE RALPH WATSON,  
*Assistant in Botany, (U.)*  
 406 Huron Street.
- A WALTER IRWIN WELLS,  
*Assistant in Astronomy, (U.)*  
 56 Murray Street.
- A WILLIAM MENZIES WHITELAW, B.A., M.A., COLUMBIA,  
*Special Instructor in English, (C.)*  
 61 Madison Avenue
- R MARSHALL VAUGHAN WILIARD,  
*Research Assistant in Metallurgical Engineering,*  
 473 West Marion Street.
- R JOHN GUILFOYLE WILLIAMS, B.Sc., LONDON,  
*Research Assistant in Chemical Engineering, (Easter*  
*Term),*  
 60 Sussex Avenue.
- S ALEXANDER CURRIE WILSON, B.A.Sc.,  
*Instructor in Engineering Drawing,*  
 283 Evelyn Avenue.
- R FRANK ELVYN WILSON, B.A.Sc.,  
*Research Assistant in Civil Engineering,*  
 152 Lee Avenue.

- A FREDERICK B. WILSON, PHM.D., M.B.,  
*Class Assistant in Biology, (U.)*  
 1656 St. Clair Avenue West.
- M MALCOLM JAMES WILSON, M.A., M.B.,  
*Part-time Fellow in Physiology and Special Research  
 Fellow in Medicine,*  
 191 Spadina Road.
- S WILLIAM STEWART WILSON, B.A.SC.,  
*Demonstrator in Engineering Drawing,*  
 20 Humewood Drive.
- S GEORGE ROSS WORKMAN,  
*Demonstrator in Engineering Drawing,*  
 22 Helena Avenue.
- A FRED VICTOR WINNETT, M.A.,  
*Fellow in Oriental Languages, (C.)*  
 Knox College.
- R MISS EDITH WOODSWORTH,  
*Research Assistant in Connaught Laboratories,*  
 79 Olive Avenue.
- R ARTHUR MARSHALL WYNNE, M.A., QUEEN'S,  
*Senior Research Assistant in Zymology,*  
 27 Lytton Boulevard.

# ONTARIO COLLEGE OF EDUCATION

- JOHN GEORGE ALTHOUSE, M.A.,  
 326 Durie Street.
- GEORGE ALTON CLINE, D.S.O., M.A.,  
 Hart House, University of Toronto.
- ERNEST LE ROY DANIEL, B.A.,  
 224 Evelyn Avenue.
- HORACE ALEXANDER GRAINGER, B.A., B.PAED.,  
 25 Westmount Avenue.
- JOSEPH A. IRWIN, B.A.,  
 60 Grace Street
- WILLIAM JAMES LOUGHEED, M.A.,  
 286 Runnymede Road.
- JOHN HUDSON MILLS, M.A., QUEEN'S,  
 97 Tyndall Avenue.
- NORMAN LESLIE MURCH, B.A.,  
 91 Glencairn Avenue
- CHARLES EDWARD PHILLIPS, B.A.,  
 6 Burnside Avenue.

THOMAS M. PORTER,

64 Winchester Street.

WALTER LAWRENCE CHRISTIE RICHARDSON, B.A.,

83 Pine Crest Road.

JOHN FAIR VAN EVERY, B.A.,

13 Wells Street.

WALTER HERBERT WILLIAMS, M.A., QUEEN'S,

198 Glenholme Avenue.

JAMES GEORGE WORKMAN, B.A.,

Scarboro Bluffs.

## CONSTITUTION AND ADMINISTRATION OF THE UNIVERSITY

The constitution, powers and functions of the University are defined in "The University Act, 1906." (R S O., 1914, Chap. 279)

The management of the property, finances and academic business of the University is entrusted to the Board of Governors, the Senate, Convocation, the Faculty Councils, the Council of University College and the Caput. The functions of these various bodies are exercised subject to supervision and control by the Crown, as hereafter explained.

1. THE CROWN.—The Lieutenant-Governor-in-Council has the power to appoint and to remove the Board of Governors (with the exception of the Chancellor and the President); to appoint and remove the Chairman of the Board; his assent is necessary before the Board can make any expenditure which impairs the endowment of the University or College; through the Provincial Auditor or someone else appointed by himself, he audits the accounts of the Board and he requires of them an Annual Report for submission to the Legislature.

2 THE BOARD OF GOVERNORS.—The Board of Governors consists of: The Chancellor and the President, *ex-officio*, and eighteen persons appointed by the Lieutenant-Governor-in-Council, one of whom is named as Chairman of the Board. The appointed members hold office for six years, and one-third of the number retires every two years, but these members are eligible for re-election. The Board has power to appoint the President of the University; and to appoint or remove all of the officers and servants of the University or University College upon the nomination or recommendation of the President. The government, conduct, management and control of the University and University College and of the property, revenues, business and affairs thereof are vested in the Board (University Act, 1906, Section 37), but all expenditures of endowment must be authorised by the Lieutenant-Governor-in-Council. The Board makes by-laws, rules and regulations regarding the investment of the funds; the selling and leasing of University properties; the letting of contracts; the appointment and removal of the Bursar and his assistants, clerks and other officers and servants of the University, the rate of salaries to be paid to the staff and officers, the fees to be paid by students, the annual appropriations and the transaction of other business.

3. THE SENATE.—The Senate consists of four classes of members. (1) Ex-officio members; (2) Faculty members; (3) Appointed members, and (4) Elected members. The ex-officio members are the Chancellor, the Chairman of the Board of Governors, the President of the University, the Principal of University College, the President or other head of each federated university or college, the Deans of the Faculties of Arts, Medicine, Applied Science and Engineering, Household Science, Education, Forestry



and Mus.c, all past Chancellors, Vice-Chancellors and Presidents. Representation of the Faculties is made up as follows, The professors, not including the associate professors, of the Faculty of Arts of the University, five members of the Faculty of Medicine; five members of the Faculty of Applied Science and Engineering, two members of the Faculty of Education, three members from each of the four Arts Colleges, University College, Victoria University, Trinity College and St. Michael's College. The appointed members consist of one representative appointed by each federated university, two by each federated college, one by the Law Society of Upper Canada and one by each federated institution, subject, however, in the latter case, to certain restrictions. The elected members number thirty-six, made up of twelve members representing the graduates in Arts who at graduation were enrolled in University College; five members each representing similar graduates in Victoria College and Trinity College; four representing the graduates in Medicine; two each representing the graduates in Applied Science and Engineering and in Agriculture; two representing the graduates in Law, and four representing the principals of collegiate institutes or high schools or assistants therein who are actually engaged in teaching in such institute or school. The graduates in Medicine and Law of Victoria University and Trinity College vote with the graduates of the University of Toronto in these same faculties.

The body thus composed is renewed once in four years, when all except the ex-officio members and the representatives of the Faculty of Arts of the University must retire, but are eligible for reappointment or re-election. The Chairman of the Senate is the President.

The Senate has the power to fill any vacancy which may occur among the elected members of the Senate and to return a final decision in any dispute which may arise in connection with the Senate elections. Among the powers and duties of the Senate are the following: To provide for the regulation and conduct of its proceedings, for the granting of degrees, including honorary degrees, and certificates of proficiency, except in Theology; for the establishment of exhibitions, scholarships and prizes; for the affiliation of any college established in Canada, for the dissolution or modification of the terms of affiliations; for the cancellation, recall and suspension of degrees; for the establishment of any faculty, department, chair or course of instruction in the University, or any department, chair or course of instruction in University College, except Theology; for the conduct of the election of members of the Senate; for the appointment of examiners and the conduct of all University examinations other than those in the faculties; for the representation on the Senate of any faculty which may hereafter be established; for the preparation and publication of the calendars; to consider and determine on the report of the faculties, the courses of study in these faculties; and all other courses of study for which no faculty is created; to consider and determine on the report of the various faculty councils, the appointment of examiners and the conduct and results of the examinations in these faculties; to consider such matters as may be

reported to it by the council of any faculty and to communicate its opinion or action thereon to the council; to hear and determine appeals from decisions of the faculty councils upon applications and memorials by students and others, to make rules and regulations for the management and conduct of the Library and to prescribe the duties of the Librarian, to make such changes in its own composition as may be deemed expedient, and to make such recommendations to the Board as may be deemed proper for promoting the interests of the University and of University College or for carrying out the objects and provisions of the Act

4. CONVOCATION.—Convocation consists of the whole body of graduates of the University, in all faculties. Except indirectly through its elected representatives, no part of the management of the University is exercised by it as a whole. It elects the Chancellor, and, in divisions according to faculty, it elects members of Senate, as its representatives in Arts, Medicine, Law, Applied Science and Engineering and Agriculture. Any question relating to University affairs may be discussed by it, and a vote taken. The result of such discussion is communicated to the Senate, which must consider the representation made, and return to Convocation its conclusion thereon.

5. FACULTY COUNCILS.—The seven faculties of Arts, Medicine, Applied Science and Engineering, Household Science, Education, Forestry and Music have each a Council, the President being Chairman, *ex-officio*, of the first and the Deans of the respective faculties of the other five. All professors, associate professors and assistant professors engaged in teaching students of any faculty have a seat and vote upon the council of the faculty whose students they teach, lecturers also, provided they are upon the permanent staff, have a seat but no vote in the council. Each council is autonomous, and has the settlement in the first instance of all applications and memorials from its students, the drawing up of a curriculum of studies, and the appointment of examiners and conduct of examinations. In the case of applications and memorials the settlement by the council is subject to an appeal to the Senate, in the case of courses of studies, appointment of examiners and conduct of examinations, the decisions of the councils are subject to the approval of and confirmation by the Senate.

The Council of the Faculty of Arts includes the Principal of University College, the President or other head of every federated university, the Dean of the Faculty of Arts, the teaching staff of University, Victoria, Trinity and St. Michael's College (except in the case of those whose appointments are temporary), and one professor in the Department of Religious Knowledge appointed by each federated university or college.

6. THE CAPUT.—The Caput is a committee composed of the President, the Principal of University College, the Heads of the federated universities, the Heads of the federated colleges, and the Deans of the faculties of the University.

It has power to authorize teaching and lectures by others than the duly appointed members of the teaching staff, to exercise discipline over

students, where more than one college or one faculty is concerned, or where breaches of discipline occur outside the buildings or grounds appropriated to the several colleges and faculties

7. THE COUNCIL OF UNIVERSITY COLLEGE.—This body is composed of the Principal and the professors, associate professors and assistant professors of the College. It has committed to it the direction and management of the College with full authority over and entire responsibility for the discipline (including the imposition of reasonable fines) of the undergraduates in relation to the lectures and other instruction of the professors, lecturers and other teachers of the College, and no lecturing or teaching of any kind may be carried on in the College by any other than the duly appointed professors or teachers without the authority of the Council.

8. FEDERATED INSTITUTIONS.—The following institutions are federated with the University, viz, Victoria College, Trinity College, St. Michael's College, Knox College and Wycliffe College. The president or other head of each is, ex-officio, a member of the Senate and of the University Council. In addition, Knox and Wycliffe Colleges each appoint two other representatives on the Senate. Victoria and Trinity Colleges each appoint one member and the graduates of each elect five more representatives to represent each College. All regular students matriculated in the University who are enrolled in University College or Victoria College or Trinity College or St. Michael's College and who enter their names with the Registrar of the University are entitled to free instruction in Arts in the University. But this provision does not include exemption from laboratory fees, nor does it apply to graduate instruction. When a federated college, by arrangement with the University Council, teaches any part of the Arts course the Board of Governors may make a reduction in the fees of students taught in such College.

9. REVENUES OF THE UNIVERSITY.—In addition to the income from the balance of the original endowment and additions made to it from time to time, the Legislature grants to the University, annually, the sum of \$500,000 from the revenues of the Province. In addition, the annual deficit upon maintenance account is borne by the Province.

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MATRICULATION

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## MATRICULATION

### SUBJECTS

A candidate for Pass Matriculation must write upon the examinations conducted by the Department of Education of Ontario in the following subjects of the Middle School:

LATIN (Authors, one paper; Composition, one paper)

ENGLISH (Literature, one paper; Composition, one paper)

HISTORY (British, one paper; Ancient, one paper)

MATHEMATICS (Algebra, one paper; Geometry, one paper)

Any two of:

GREEK (Authors, one paper; Composition, one paper)

FRENCH (Authors, one paper; Composition, one paper)

GERMAN (Authors, one paper, Composition, one paper)

SPANISH (Authors, one paper, Composition, one paper) *or*

ITALIAN (Authors, one paper, Composition, one paper)

EXPERIMENTAL SCIENCE (Physics, one paper, Chemistry, one paper) *or*

AGRICULTURE (Part I, one paper, Part II, one paper)

In certain cases foreign students may present themselves for examination in their language instead of Greek or French or German or Spanish or Italian when the language and the curriculum in that language have been approved by the Senate. The examination in an approved language consists of two papers, similar in character to those in English.

A candidate for Honour Matriculation must write upon the examinations conducted by the Department of Education of Ontario in one or more of the following subjects of the Upper School.

GREEK (Authors, one paper; Composition, one paper)

LATIN (Authors, one paper; Composition, one paper)

ENGLISH (Literature, one paper; Composition, one paper)

FRENCH (Authors, one paper, Composition, one paper)

GERMAN (Authors, one paper; Composition, one paper)

SPANISH (Authors, one paper; Composition, one paper) *or*

ITALIAN (Authors, one paper; Composition, one paper)

HISTORY (one paper)

MATHEMATICS (Algebra, one paper, Geometry, one paper; Trigonometry, one paper. \*Problems, one paper)

PHYSICS (one paper).

ZOOLOGY (one paper)

BOTANY (one paper)

CHEMISTRY (one paper).

\*For certain Scholarship candidates only, see pages 94 and 97.

These examinations, for both Pass and Honour Matriculation, are conducted by the Department at various centres throughout the Province of Ontario in June of each year.

### STANDARDS

A candidate for Pass Matriculation will be allowed to write on one or more papers at a time in any order, and on obtaining at least fifty per cent. of the marks assigned to any paper will be given credit for having passed in such paper and will receive a certificate of such standing.

A candidate for Honour Matriculation will be allowed to write on one or more papers at a time in any order

In order to secure First Class Honours in a subject a candidate must obtain at one examination at least seventy-five per cent. of the marks assigned to that subject and at least fifty per cent. in each paper of that subject.

In order to secure Second Class Honours in a subject a candidate must obtain at one examination at least sixty-six per cent. of the marks assigned to that subject and at least fifty per cent. in each paper of that subject.

In order to secure Third Class Honours in a subject a candidate must obtain at one examination at least sixty per cent. of the marks assigned to that subject and at least fifty per cent. in each paper of that subject.

A candidate who fails to obtain First, Second or Third Class Honours in a subject under the above regulations, may secure credit for the subject by obtaining at least fifty per cent. on each paper of the subject, not necessarily at one examination

Such credit in a subject will be accepted by the University as covering the Honour Matriculation requirement with respect to that subject for admission to any faculty.

Except in the case of English, such credit in a subject will also be accepted by the University as entitling the candidate, if registered in the Faculty of Arts, to exemption from the Pass work of the First Year in that subject, wherever the subject is included in the First Year of the Pass Course, but such exemption cannot be claimed in more than two subjects by a student registering in the First Year of the Pass Course

Such credit in English will be accepted by the University as entitling the candidate, if registered in the Faculty of Arts, to exemption from Pass English of the First Year only when the candidate presents certificates showing (a) that he obtained at least 60% in the subject and (b) that he has credit for two additional subjects

### FACULTY OF ARTS

A candidate for admission to the First Year in the Faculty of Arts must produce satisfactory certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he proposes to register.

Each candidate for admission to the Faculty of Arts must submit his application for admission together with his certificates, to the Registrar of the University, **not later than September 10th.**

#### ADMISSION TO THE PASS COURSE

A candidate for admission to the First Year of the Pass Course must present certificates covering *complete* Pass Matriculation.

A candidate for admission who presents, in addition to complete Pass Matriculation, certificates giving him credit at the Honour Matriculation examination in at least five of the six subjects of the First Year of the Pass Course as set forth in the schedule below, may be admitted to the Second Year of that Course, a candidate who lacks credit for one subject will be required to pass the First Year or equivalent examination in that subject before he will be allowed to register in the Third Year. A candidate who has not complete Pass Matriculation may be admitted to the Second Year of the Pass Course if he presents certificates giving him credit at the Honour Matriculation examination in the six subjects of the First Year. The prescribed fee for such admission to the Second Year is fifteen dollars. The subjects of First Year are as follows

1. English
2. Latin
3. Algebra and Geometry
4. One of Greek, German, French, Italian, Spanish
5. History or Trigonometry
6. One of a second language from 4, Physics, Zoology, Botany, Chemistry.

#### ADMISSION TO AN HONOUR COURSE

A candidate for admission to the First Year of an Honour Course must present, in addition to complete Pass Matriculation, certificates giving him credit at Honour Matriculation in the subjects prescribed below for the Honour Course which he wishes to enter.

NOTE. The term "additional subject" includes any one of English, History, Greek, French, German, Italian, Spanish, Trigonometry, Physics, Zoology, Botany, Chemistry

CLASSICS—Greek; Latin, Mathematics (Algebra and Geometry); together with two additional subjects, one of which should be French or German.

FRENCH GREEK AND LATIN—Latin; Mathematics (Algebra and Geometry); two of Greek, English, French, together with an additional subject.

MODERN LANGUAGES—Latin; French; Mathematics (Algebra and Geometry); one of German, Italian, Spanish; together with an additional subject

ENGLISH AND HISTORY:—Latin, Mathematics (Algebra and Geometry); two of Greek, English, French, German, together with an additional subject.

\*MODERN HISTORY { Latin; Mathematics (Algebra and Geometry);  
History; French or German, together with an  
additional subject.

\*POLITICAL SCIENCE {  
\*PHILOSOPHY —Latin, English, Mathematics (Algebra and Geometry); one of History, Greek, French, German, Physics; together with an additional subject

PHILOSOPHY (ENGLISH OR HISTORY OPTION):—Latin; Mathematics (Algebra and Geometry), one of History, English, Physics, one of Greek, French, German; together with an additional subject

PSYCHOLOGY—Latin, Mathematics (Algebra and Geometry, Trigonometry), French or German, and one of Physics, Zoology, Botany, Chemistry.

MATHEMATICS: { Latin, Mathematics (Algebra and Geom-  
MATHEMATICS AND PHYSICS { etry, Trigonometry), Physics, and  
French or German

PHYSICS

BIOLOGY

PHYSIOLOGY AND BIOCHEMISTRY

BIOLOGICAL AND MEDICAL SCIENCES

CHEMISTRY

CHEMISTRY, MINERALOGY AND GEOLOGY

GEOLOGY AND MINERALOGY.

SCIENCE (GENERAL)

HOUSEHOLD SCIENCE

HOUSEHOLD ECONOMICS —Latin, Mathematics (Algebra and Geometry); two of English, French or German, Physics, Zoology, Botany, Chemistry, together with an additional subject; the candidate is recommended to take French or German and a science

{ Latin, Mathematics (Algebra and Geometry, Trigonometry); French or German, and one of Physics, Zoology, Botany, Chemistry

#### ADMISSION TO COMMERCE AND FINANCE

A candidate for admission to the First Year of the Course in Commerce and Finance must present certificates giving him credit in the following subjects of Pass and Honour Matriculation

#### PASS MATRICULATION

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

\*A student may qualify for admission to the Second Year of this course by obtaining complete standing in the First Year of the Pass Course with an average of sixty-six per cent in at least four subjects.



Three of:

GREEK (Authors and Composition)  
 LATIN (Authors and Composition)  
 FRENCH (Authors and Composition)  
 GERMAN (Authors and Composition)  
 SPANISH (Authors and Composition) *or*  
 ITALIAN (Authors and Composition)  
 EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*  
 AGRICULTURE (Parts I and II)

#### HONOUR MATRICULATION

ENGLISH (Literature and Composition)  
 MATHEMATICS (Algebra, Geometry and Trigonometry)

Two of:

LATIN (Authors and Composition)  
 GERMAN (Authors and Composition)  
 FRENCH (Authors and Composition)  
 SPANISH (Authors and Composition) *or*  
 ITALIAN (Authors and Composition)  
 PHYSICS *or*  
 ZOOLOGY *or*  
 BOTANY *or*  
 CHEMISTRY.

A student who submits a Part I Commercial Specialist's Certificate may substitute the same for Ancient History and a language of Pass Matriculation and for the Geometry and Trigonometry of Honour Matriculation

#### FACULTY OF MEDICINE

A candidate for admission to the First Year in the Faculty of Medicine must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register; only under exceptional circumstances will a candidate of thirty years or more be admitted.

He must also present certificates giving him *full* credit in the following subjects of Pass and Honour Matriculation:

#### PASS MATRICULATION

LATIN (Authors and Composition)  
 ENGLISH (Literature and Composition)  
 HISTORY (British and Ancient)  
 MATHEMATICS (Algebra and Geometry)  
 EXPERIMENTAL SCIENCE (Physics and Chemistry)

Any one of:

GREEK (Authors and Composition)

FRENCH (Authors and Composition)  
GERMAN (Authors and Composition)  
SPANISH (Authors and Composition)  
ITALIAN (Authors and Composition)

#### HONOUR MATRICULATION

ENGLISH (Literature and Composition)  
MATHEMATICS (Algebra, Geometry and Trigonometry)  
One of:

- ✓ LATIN (Authors and Composition)
- GREEK (Authors and Composition)
- FRENCH (Authors and Composition)
- GERMAN (Authors and Composition).

NOTE: Physics or Botany or Zoology or Chemistry of Honour Matriculation may be substituted for Trigonometry.

A student who has fully completed the First Year in the Faculty of Arts of the University of Toronto, will be admitted to the First Year in the Faculty of Medicine, provided he has at least Pass Matriculation standing in Experimental Science.

Each candidate for admission to the First Year must submit his application for admission together with his certificates, to the Registrar of the University, **not later than September 1st.**

A candidate for admission from the British Isles must present a certificate of registration as a medical student with the General Medical Council of Great Britain.

#### FACULTY OF APPLIED SCIENCE AND ENGINEERING

A candidate for admission to the First Year in the Faculty of Applied Science and Engineering must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him credit in the following subjects of Pass and Honour Matriculation:

#### PASS MATRICULATION

ENGLISH (Literature and Composition)  
HISTORY (British and Ancient)  
MATHEMATICS (Algebra and Geometry)  
Any three of:  
LATIN (Authors and Composition)  
GREEK (Authors and Composition)  
FRENCH (Authors and Composition)  
GERMAN (Authors and Composition)  
SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition)  
 EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*  
 AGRICULTURE (Parts I and II)

#### HONOUR MATRICULATION

ENGLISH (Literature and Composition)  
 MATHEMATICS (Algebra, Geometry and Trigonometry)  
 One of:

LATIN (Authors and Composition)  
 GREEK (Authors and Composition)  
 FRENCH (Authors and Composition)  
 GERMAN (Authors and Composition)  
 SPANISH (Authors and Composition) *or*  
 ITALIAN (Authors and Composition).

In selecting the options it is recommended that students take French, German and Experimental Science. In the Department of Architecture, French is required, in the Departments of Chemical Engineering and Mechanical Engineering it is desirable that students take German, in the Department of Metallurgical Engineering, Spanish and Experimental Science are recommended.

A candidate for admission from the British Isles must present a certificate showing that he has passed or has exemption from the Preliminary Examination of the Institution of Civil Engineers.

#### FACULTY OF FORESTRY

A candidate for admission to the First Year in the Faculty of Forestry must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him credit in the following subjects of Pass and Honour Matriculation:

#### PASS MATRICULATION

ENGLISH (Literature and Composition)  
 HISTORY (British and Ancient)  
 MATHEMATICS (Algebra and Geometry)

Any three of:

LATIN (Authors and Composition)  
 GREEK (Authors and Composition)  
 FRENCH (Authors and Composition)  
 GERMAN (Authors and Composition)  
 SPANISH (Authors and Composition) *or*  
 ITALIAN (Authors and Composition)  
 EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*  
 AGRICULTURE (Parts I and II).

## HONOUR MATRICULATION

ENGLISH (Literature and Composition)

MATHEMATICS (Algebra, Geometry and Trigonometry)

Any one of:

LATIN (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

In selecting the options it is recommended that students take French or German of Honour Matriculation.

## FACULTY OF MUSIC

For admission in 1925, the subjects for Matriculation in Music are:

ENGLISH (Literature and Composition)

Any two of:

LATIN (Authors and Composition)

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition)

A candidate for the degree of Bachelor of Music must complete his Matriculation prior to admission to the examination of the final year.

The pass standard is the same as that for Pass Matriculation.

For admission to the Faculty of Music in 1926 a candidate will be required to present certificates giving him credit in the following subjects of Pass Matriculation:

LATIN (Authors and Composition)

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

Any two of

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition)

EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*

AGRICULTURE (Parts I and II)

## FACULTY OF DENTISTRY

A candidate for admission to the First Year in the Department of Dentistry (Royal College of Dental Surgeons) must produce satisfactory

certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him *full* credit in the following subjects of Pass Matriculation:

LATIN (Authors and Composition)

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

EXPERIMENTAL SCIENCE (Physics and Chemistry)

Any one of:

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition).

### SPECIAL MATRICULATION CONDITIONS

The new regulations outlined on page 6 by which any candidate may receive credit in one or more papers at an examination have rendered unnecessary the special regulations for the industrial candidate. Consequently such candidate will *no longer* be required to send his statement of marks, together with a certificate of employment to the Secretary of the University Matriculation Board, in order to secure credit for the papers in which he has passed.

### ANNUAL EXAMINATION

The examination for Pass and Honour Matriculation is held annually in June at centres in Ontario, and, if application is made to the Senate, the examination may, with the co-operation of the Department of Education, be held at centres outside Ontario.

Applications must be sent not later than May 15th, to the local Public School Inspector, or in the case of candidates intending to write at the University, to the Registrar.

Scholarship candidates must also send a special application by the same date to the Registrar, according to a form to be obtained from him.

The prescribed fee will be paid to the presiding officer by the candidate, when he presents himself for examination.

The Junior Matriculation examination will be held in June at such centres outside Ontario as may from time to time be authorized by the Senate. Applications for the establishment of such local centres must be made to the Registrar not later than April 15th, in each year. Applications from candidates for this examination must be sent to the Registrar not later than May 15th.

The presiding examiner's fee, together with any other necessary expenses

in connection with such an examination, must be met by the candidates at the centre, or by the authorities of the School or College on whose application it is held

### EQUIVALENT EXAMINATIONS

A person who has passed the Matriculation examination of another University may be admitted *ad eundem statum* on such conditions as the Senate, on application, may prescribe.

The local examinations conducted by the University of Oxford and the University of Cambridge may be accepted *pro tanto*.

Certificates of having passed the subjects common to the Matriculation and other examination of any of the following examinations will be accepted *pro tanto*, provided always that the standards of these certificate as to subjects and percentages meet the requirements of this University.

#### PROVINCE OF ONTARIO

The Middle School or Upper School examinations or examinations of the same standard under other names.

#### PROVINCE OF QUEBEC

The University School Leaving Certificate examination.

The Intermediate School Diploma examination.

#### PROVINCE OF NEW BRUNSWICK

The examinations for Grammar School, or Superior or First Class Licences.

#### PROVINCE OF NOVA SCOTIA

The Grade XI and Grade XII examinations.

#### PROVINCE OF MANITOBA

The Grade XI (Matriculation) and Grade XII examinations.

#### PROVINCE OF BRITISH COLUMBIA

The Junior and Senior Matriculation examinations.

#### PROVINCE OF PRINCE EDWARD ISLAND

The First Class Teachers' License examination.

#### PROVINCE OF ALBERTA

The Grade XI (Junior Matriculation) and Grade XII examinations.

#### PROVINCE OF SASKATCHEWAN

The First and Second Class Teachers' examinations.

The Senior and Junior Matriculation examinations.

#### NEWFOUNDLAND

Associate in Arts examinations

Candidates whose certificates do not cover all the subjects may complete matriculation by passing in the remaining subjects as prescribed by the University, or by passing in the subjects of similar standard as prescribed by the Education Department of the Province by which the certificate was issued.

The Senate will consider applications for the recognition of certificates other than those mentioned, as occasion may require.

### FEEES

The Fees payable are as follows:—

For registration of certificates for other than University purposes.....	\$5 00
For registration of certificates other than those of Ontario, which exempt the applicant from the full Matriculation examination .....	5 00
For admission <i>ad eundem statum</i> ..	5.00

## MATRICULATION SCHOLARSHIPS

All Matriculation Scholarships offered by the University of Toronto are tenable only by students registered in the Faculty of Arts and proceeding to the degree of Bachelor of Arts, with the exception of the following:

1. The Robert Bruce Bursary and Scholarship, tenable by students registered in the Faculty of Arts or in the Faculty of Medicine;
2. The Ontario Hockey Association War Memorial Scholarship, tenable by a student in any faculty.
3. The F. W. Jarvis Bursaries, tenable by a student in any faculty.

Where there is no letter prefixed the scholarship is open to all competitors and is tenable in any one of the Colleges. In all other cases, the letter C. indicates University College, the letter V., Victoria College, the letter T., Trinity College; and the letter M., St. Michael's College the student to whom one of these scholarships is awarded is required to enroll in each year of his course in the College to which the scholarship belongs.

## PASS MATRICULATION SCHOLARSHIPS

Two Scholarships, known as "The First and Second Gibson Pass Matriculation Scholarships", of the value of \$120 and \$100 respectively with free tuition for one year, have been endowed by Sir John M. Gibson, of Hamilton, a graduate in Arts of 1863.

They will be awarded subject to the following conditions:

1. All candidates for these Scholarships must have been bona fide students of the Hamilton Collegiate Institute for at least the two years immediately preceding the award.

- 2 Each candidate must send a special application not later than May 15th to the Registrar of the University according to a form to be obtained from him, in this form he must state in writing that it is his intention to proceed to a degree in Arts in one of the Colleges of the University of Toronto.

3. The Scholarships shall be awarded annually upon the results of the June Pass Matriculation Examinations conducted by the Department of Education of Ontario in the year of the award and in the year immediately preceding the award. The subjects and standards shall be those prescribed for Pass Matriculation in the Faculty of Arts.

4. In each of these two years candidates must present themselves for examination and obtain credit in the subjects for which they have been prepared in accordance with the arrangement of studies in the Hamilton Collegiate Institute.



5. Successful candidates must register in the First Year of the Pass Course in the Faculty of Arts during the session immediately following the award, unless special permission is granted by the Senate of the University to postpone such registration.

6. The cash payment of the Scholarships shall be made in the month of February in this session. Before payment can be made the scholar must present the prescribed certificate of attendance.

7. In the event that a scholar decides to attend the Hamilton Collegiate Institute for the session following the award, in order to pursue the course of study for Honour Matriculation, the payment of the Scholarship shall be deferred until the scholar registers in the Faculty of Arts at the University.

8. The holder of a Gibson Pass Matriculation Scholarship is not debarred from competing for an Honour Matriculation Scholarship in the University of Toronto.

## HONOUR MATRICULATION SCHOLARSHIPS

### REGULATIONS REGARDING THE UNIVERSITY SCHOLARSHIPS

All Scholarships shall be awarded upon the marks obtained at the examination for Honour Matriculation conducted by the Department of Education of Ontario, and the marks in each subject shall be assigned on the basis of 100 for each paper in the subject as defined on page 5.

Candidates for Matriculation Scholarships must send a special application not later than May 15th to the Registrar of the University, according to a form to be obtained from him.

This application shall be accompanied by certificates showing that the candidate has complete Pass Matriculation standing.

Each candidate shall at the Scholarship examination obtain credit in all the subjects of Honour Matriculation required for admission to the First Year of an Honour Course in the Faculty of Arts, as defined on pages 7 and 8.

A candidate to whom a scholarship has been awarded at a Matriculation examination may not compete for a scholarship at a subsequent Matriculation examination. This regulation does not debar the holder of a Gibson Pass Matriculation Scholarship from competing for an Honour Matriculation Scholarship.

With the exception of the Prince of Wales Scholarship, no one shall be entitled to hold more than one University scholarship; but any one who, for this provision, would have been entitled to a second scholarship will be published in the lists.

College Scholarships may be held with University Scholarships.

Every candidate for a Matriculation scholarship tenable only in the Faculty of Arts, shall, on application for examination, sign a declaration to the effect that he intends to proceed to the degree of Bachelor of Arts in this University. Such candidate must at the same time indicate the College in which he intends to enrol.

No scholarship or bursary will be awarded save on condition that the candidate becomes a matriculated student in actual attendance in this University

Free tuition awarded will be available on the following conditions:—For the First Year on the award of the scholarship; for any year after the first on proof that the claimant has passed his examination for the preceding year with a first class in an honour course.

In case in any year any scholarship be not taken, it will be allowable to award such scholarship, or some part thereof, to a candidate who has shown special excellence in the examination in some other group and has taken scholarship rank therein, but has failed to win a scholarship therein.

These regulations are subject to change by the Senate

#### REGULATIONS RESPECTING UNIVERSITY COLLEGE SCHOLARSHIPS

Scholarships in University College are tenable with a University Scholarship, always providing that the winner be in first class honours in Classics at Matriculation and becomes and continues to be a registered student in attendance upon lectures either in Classics or in English and History with the Classical option in University College. In the event of no eligible candidate being forthcoming at Matriculation for these scholarships, the scholarships will be held over until the year following.

#### REGULATIONS RESPECTING VICTORIA COLLEGE SCHOLARSHIPS

Scholarships in Victoria College are tenable with a University Scholarship, always providing that the winner be in first class honours at Matriculation and becomes and continues to be a registered student in attendance upon lectures in Victoria College

#### REGULATIONS RESPECTING TRINITY COLLEGE SCHOLARSHIPS

The regulations governing University Scholarships are applicable to Trinity College Scholarships, *mutatis mutandis*, with the additional regulation that the holder is ordinarily required to reside in College, unless special permission to the contrary is given by the Executive Committee.

As a Trinity College Scholarship is generally held in conjunction with a University Scholarship, the holder in such case enjoys (a) free tuition, (b) the cash value of the University Scholarship, (c) the cash value of the Trinity College Scholarship. For example, if he holds the Wellington Scholarship in Classics and a First Edward Blake Scholarship in the same department, his University Scholarship entitles him to free tuition for four years, which is equivalent to \$400, and he receives in addition \$90 from the University, and \$120 from Trinity College, making a total value of \$510. A further advantage is that the winner is assured of accommodation in the Trinity College Residence (or in St. Hilda's in the case of women), as Scholars are given precedence over all other applicants when rooms are being assigned.

## PROFICIENCY SCHOLARSHIPS

Candidates for Proficiency Scholarships in any one of the following groups must either

(a) Obtain fifty per cent in each of the eleven papers prescribed in each Group, together with an average of seventy-five per cent., *or*

(b) Obtain First Class Honours in one of the four departments—Classics, Moderns, Mathematics, Science

In case a candidate fails to secure fifty per cent. in a paper that does not form part of the Honour Matriculation requirements for admission to an Honour Course, he will not necessarily be disqualified from competing for a Proficiency Scholarship, but such mark will not be taken into consideration in the Scholarship award.

## CLASSICS PROFICIENCY

GREEK, LATIN, ENGLISH, FRENCH, HISTORY, MATHEMATICS (Algebra and Geometry).

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$100, with free tuition for four years, of a total possible value of \$400.

The Second Edward Blake Scholarship of the value of \$75, with free tuition for four years, of a total possible value of \$375.

The Third Edward Blake Scholarship of the value of \$50, with free tuition for four years, of a total possible value of \$350.

## MODERNS PROFICIENCY

LATIN, ENGLISH, FRENCH, GERMAN, HISTORY, MATHEMATICS (Algebra and Geometry).

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$100, with free tuition for four years, of a total possible value of \$400.

The Second Edward Blake Scholarship of the value of \$75, with free tuition for four years, of a total possible value of \$375.

The Third Edward Blake Scholarship of the value of \$50, with free tuition for four years, of a total possible value of \$350 .

## MATHEMATICS PROFICIENCY

LATIN, ENGLISH, FRENCH, MATHEMATICS (Algebra, Geometry, Trigonometry, Problems), PHYSICS.

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$100, with free tuition for four years, of a total possible value of \$400.

The Second Edward Blake Scholarship of the value of \$75, with free tuition for four years, of a total possible value of \$375.

The Third Edward Blake Scholarship of the value of \$50, with free tuition for four years, of a total possible value of \$350.

#### SCIENCE PROFICIENCY

LATIN, FRENCH, MATHEMATICS (Algebra, Geometry, Trigonometry),  
SCIENCE (Physics, Zoology, Botany, Chemistry).

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$100, with free tuition for four years, of a total possible value of \$400

The Second Edward Blake Scholarship of the value of \$75, with free tuition for four years, of a total possible value of \$375.

The Third Edward Blake Scholarship of the value of \$50, with free tuition for four years, of a total possible value of \$350.

#### SPECIAL PROFICIENCY SCHOLARSHIPS

Candidates for these scholarships are required to obtain First Class Honours in at least one Department

The Prince of Wales Scholarship, the gift of the late King Edward VII., of the value of \$50, shall be awarded to the candidate standing highest in Latin, French and Algebra and Geometry who is also awarded one of the preceding scholarships.

U The Gibson Scholarship, the gift of the Hon. Sir John M. Gibson, of the value of \$100, with free tuition for three years, of a total possible value of \$325. This scholarship shall be awarded to the candidate who, qualifying for one of the preceding scholarships and excluding the Prince of Wales Scholar, has the highest aggregate in the subjects of Latin, English, French, History, Algebra and Geometry.

This scholarship is open for competition only to students who have stated their intention of enrolling in University College, and is not tenable with any other matriculation scholarship awarded by the University, except a Gibson Pass Matriculation Scholarship.

V. The Hamilton Fiske Biggar Scholarship of the value of \$100 with free tuition for three years, of a total possible value of \$325. This scholarship shall be awarded to the candidate who, qualifying for one of the preceding scholarships and excluding the Prince of Wales Scholar, has the highest aggregate in the subjects of Latin, English, French, History, Algebra and Geometry.

T The Upper Canada College-Trinity Scholarship, the gift of Upper Canada College Old Boys, who are alumni of Trinity College, of the value of \$100

The successful candidate must obtain first class honours in at least one department. Pass papers rank at half the value of Honour papers. The sum of \$60 will be paid in equal terminal instalments in the first year, and \$40 in the second year.

- T. The F. A. Bethune Scholarship, the gift of the trustees of the F. A. Bethune Memorial Fund, of the value of \$60

This Scholarship will be awarded to the candidate from Trinity College School, Port Hope, who obtains the highest number of marks, being not less than two-thirds of the total, at the Honour Matriculation Examination, and becomes and continues a resident undergraduate of Trinity College, Toronto, for the whole of the year for which he holds the Scholarship.

#### ENGLISH, HISTORY AND CLASSICS.

- T. The Bishop Strachan Scholarship, founded in memory of the first Bishop of Toronto, of the value of \$40 a year for two years.

#### ENGLISH, HISTORY, LATIN AND FRENCH.

- T. The Dickson Scholarship, the gift of the late William Dickson, Esq., of the value of \$60 a year for two years

### SCHOLARSHIPS IN ONE DEPARTMENT

Candidates for these scholarships must obtain first class honours in their departments

#### CLASSICS—GREEK AND LATIN

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$90, with free tuition for four years, of a total possible value of \$390

The Second Edward Blake Scholarship of the value of \$60, with free tuition for four years, of a total possible value of \$360

The First Mary Mulock Scholarship, the gift of the late Mrs. Mulock, of the value of \$60, with free tuition for three years, of a total possible value of \$285

The Second Mary Mulock Scholarship, the gift of the late Mrs. Mulock, of the value of \$60, with free tuition for two years, of a total possible value of \$210

- C. The McCaul Scholarship, the gift of G. A. H. Fraser, M.A., formerly Fellow in Classics 1889-91, Andrew Melville Stewart, M.A., LL.B., Honour graduate in Classics, 1891, and Principal Hutton, of the value of \$75, with free tuition for four years, of a total possible value of \$375

- V. The Moses Henry Aikins Scholarship, the gift of the late Moses Henry Aikins, B.A., 1855, M.D., of the value of \$100, with free tuition for four years, of a total possible value of \$400
- V. The Flavelle Scholarship, the gift of Sir J. W. Flavelle, Bart., LL.D., of the value of \$60, with free tuition for three years, of a total possible value of \$285.
- V. The W. E. H. Massey Scholarship, the gift of the late W. E. H. Massey, Esq., of the value of \$50, with free tuition for two years, of a total possible value of \$200.
- T. The Wellington Scholarship, founded by the first Duke of Wellington, of the value of \$60 a year for two years.

## GREEK

The George R. R. Cockburn Scholarship, the gift of the late Mary Cockburn. Awarded to the successful candidate at the scholarship examination who ranks highest in First Class Honours in Greek.

This scholarship is tenable with any other University scholarship

## MODERNS—ENGLISH, GERMAN, FRENCH

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$90, with free tuition for four years, of a total possible value of \$390

The Second Edward Blake Scholarship of the value of \$60, with free tuition for four years, of a total possible value of \$360.

- V The Moses Henry Aikins Scholarship, the gift of the late Moses Henry Aikins, B.A., 1855, M.D., of the value of \$100, with free tuition for four years, of a total possible value of \$400.
- T. The Dickson Scholarship, the gift of the late William Dickson, Esq., of the value of \$60 a year for two years.

## MATHEMATICS—ALGEBRA, GEOMETRY, TRIGONOMETRY, PROBLEMS

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$90, with free tuition for four years, of a total possible value of \$390

The Second Edward Blake Scholarship of the value of \$60, with free tuition for four years, of a total possible value of \$360 each

- V. The Moses Henry Aikins Scholarship, the gift of the late Moses Henry Aikins, B.A., 1855, M.D., of the value of \$100, with free tuition for four years, of a total possible value of \$400

- T. The Wellington Scholarship, founded by the first Duke of Wellington, of the value of \$60 a year for two years.
- T. The Professor William Jones Scholarship, founded in memory of the late Reverend William Jones, M.A., D.C.L., by relatives and other personal friends. It is open only to students matriculating from Trinity College School, Port Hope.

#### SCIENCE—PHYSICS, CHEMISTRY, ZOOLOGY, BOTANY

The First Edward Blake Scholarship, the gift of the late Hon. Edward Blake, formerly Chancellor of this University, of the value of \$90, with free tuition for four years, of a total possible value of \$360.

The Second Edward Blake Scholarship of the value of \$60, with free tuition for four years, of a total possible value of \$360.

- V. The Moses Henry Atkins Scholarship, the gift of the late Moses Henry Atkins, B.A., 1855, M.D., of the value of \$100, with free tuition for four years, of a total possible value of \$400.
- T. The Burnside Scholarship, founded in memory of the late Dr. Burnside, of the value of \$40 a year for two years.

#### SPECIAL SCHOLARSHIPS AND BURSARIES

##### THE JOHN MCCRAE SCHOLARSHIPS

Two Scholarships, each known as "The John McCrae Scholarship", and of the value of approximately \$275 per year for four years, have been founded in memory of the late Lieutenant-Colonel John McCrae, B.A., M.D., of Montreal, one time Fellow in Biology of the University of Toronto, physician, soldier, poet, who died in France in January, 1918.

The purpose of the Scholarships is to assist youths of ability, promise and approved academic standing, who desire to acquire the education represented by an Arts degree, but whose circumstances are such as to make the fulfilment of that desire impracticable without assistance. It is, moreover, desired that the Scholarships should be used to stimulate such ambition among the pupils of the Guelph Collegiate Institute, John McCrae's home and boyhood school from which he matriculated and entered the University of Toronto. The award will, therefore, be limited to Matriculants into the University of Toronto from the Guelph Collegiate Institute, or failing eligible and acceptable candidates therefrom in any year, from among other Canadian Matriculants. The award shall go to a male candidate if there be one eligible and acceptable—if not, the award may, in exceptional cases, be made to a female. A scholar may be chosen from matriculants of the year in which the award is made or the previous year. If the award is made to a matriculant of the previous year, and one year of the scholar's course for degree has already been passed, the award may be limited to the remaining three years of the course.

The selection of the scholars shall be made by a Committee composed of the President of the University, the Principal of Guelph Collegiate Institute, and a member or nominee of the family of the late John McCrae. If in any year, an acceptable candidate is not found, the award need not then be made, but may be postponed to the following year; but such postponement shall not affect the next succeeding Scholarship, which shall be offered in the year in which in due course it would otherwise have been available.

Every successful candidate shall, as a condition of the award, sign a declaration of intention to proceed to a degree in Arts in the University of Toronto, and must attend lectures for the academic year immediately following the award, unless permission is granted by the Senate upon the recommendation of the Faculty for the postponement of attendance for a year. The candidate shall also sign a promise to repay to the University any sums paid to him on account of the Scholarship, if from any cause not beyond his control he shall fail to complete the full course in Arts leading to a degree. If, during the currency of the Scholarship, the candidate shall fail to maintain a satisfactory standard of efficiency in scholarship and good conduct, the award may, as to further payments, be cancelled by the selecting body after consultation with the University authorities.

One of these Scholarships will be offered in 1927 and in every second year thereafter. Candidates are required to make a special application on a form to be obtained from the Registrar. One factor in determining the award will be the character of the work shown at the Scholarship Matriculation Examination conducted by the Department of Education of Ontario.

#### THE ONTARIO HOCKEY ASSOCIATION WAR MEMORIAL SCHOLARSHIP

The Ontario Hockey Association War Memorial Scholarship, the gift of the Ontario Hockey Association, is to be awarded annually at the Scholarship Matriculation Examination to a male student who has served overseas with the Canadian forces in the Great War of 1914-1918, or to a student who is the son or daughter of one who has so served.

The value of this Scholarship is \$100 in cash, with exemption from tuition fees to the extent of \$75 per session.

In determining the award of the Scholarship, the academic qualifications of the candidates shall be first taken into account, provided always that no candidate shall be eligible for an award who has not met all the conditions required by the University of candidates for Matriculation Scholarships generally, but, *ceteris paribus*, the award shall be made to a student who is in proved need of assistance.

The award shall be made by the Senate of the University upon the report of a Committee to be appointed by the Senate, upon which Com-



mittee there shall be always one member of the Staff of the University who shall be deemed to be the representative of the Association.

Candidates for this Scholarship are required to submit special applications, forms for which may be obtained from the Registrar's Office.

#### THE WILLIAM HARDIE SCHOLARSHIP

The William Hardie Scholarship of the value of \$100, with free tuition for three years, of a total possible value of \$325, was founded in 1922 by friends in Ottawa and Perth in memory of William Hardie, B A., an ex-pupil and Classical Master (from 1905 until his death in 1920) of Ottawa Collegiate Institute.

This Scholarship is to be awarded annually on the basis of the Scholarship Matriculation Examination of this University to the candidate of Ottawa Collegiate Institute who, having fulfilled all other conditions, ranks highest in First or Second Class Honours in any two of the following subjects—Latin, Greek, English.

This Scholarship is not tenable with any other Honour Matriculation Scholarship awarded by the Senate of the University.

The award shall be made by the Senate of the University.

#### THE F. W. JARVIS BURSARIES

Two Bursaries, known as "The F W Jarvis Bursaries", of the value of \$50 each, the gift of A H Jarvis, Esq., of Ottawa, brother of F W Jarvis, to be awarded under the following conditions

1. These Bursaries are open only to former students of Ottawa Collegiate Institute (Lisgar Street), who without some such assistance may not be able to carry on their academic courses
2. They may be awarded at Matriculation or in any year of an undergraduate course in any Faculty of the University
3. They shall be awarded preferably one to a man and the other to a woman student, but if in any year students of opposite sexes do not apply, both Bursaries may be awarded to men or to women
4. A Bursary may be held in successive years by the same student and also in conjunction with any scholarship awarded by the University or the federated colleges.
5. The Bursaries shall be awarded by the Senate of the University on the recommendation of a Committee of Award consisting of the President of the University, the Principal of Ottawa Collegiate Institute and the donor; candidates shall make application for the same not later than May 15th on the special form to be obtained from the Registrar

#### THE ROBERT BRUCE BURSARY AND SCHOLARSHIP

The Robert Bruce Bursary, founded from the estate of the late Robert Bruce of Quebec, of the value of \$50, tenable for one year, shall be open to students in the Faculties of Arts and Medicine with complete matricu-

lation who have displayed marked excellence at the Honour Matriculation examination, subject to the conditions set forth below.

The Robert Bruce Scholarship, of the value of \$85, tenable for one year, shall be open to students in the Faculties of Arts and Medicine with complete matriculation who have displayed marked excellence at the Honour Matriculation examination, subject to the conditions set forth below

The Robert Bruce Bursary and Scholarship shall be open only to students (a) who are of Scottish extraction, (b) who have complete matriculation in this University as at the date of entrance, (c) who without some such assistance would be hampered entering upon a course of study in the University.

A student, who already holds a scholarship of the value of at least \$100, exclusive of free tuition, cannot qualify for either the Scholarship or the Bursary.

The Committee of Award shall consist of the President of the University, and the Deans of the Faculties of Arts, Medicine, and Applied Science and Engineering.

Applications for the Bursary and the Scholarship shall be made to the Registrar of the University not later than November 1st

#### THE MOSES HENRY AIKINS SCHOLARSHIPS

- V. Ten scholarships (including the four mentioned above) each known as the Moses Henry Aikins Scholarship, and each of the value of \$100 with free tuition for four years, of a total possible value of \$400, have been founded by the bequest of the late Moses Henry Aikins, B A., 1855, M.D., of Burnhamthorpe.

In each year some of these scholarships will be available for award to candidates who have shown special excellence in the Matriculation Examinations and are deemed to be of scholarship rank, but who may not have qualified for scholarships in any of the recognized groups of subjects.

#### THE LEONARD McLAUGHLIN SCHOLARSHIP

- T. This scholarship has been endowed by Mr. and Mrs. Michael McLaughlin, of Toronto, in memory of their only son Leonard, who was at the time of his death, December 10th, 1899, an undergraduate of Trinity College. As he was a pupil at Upper Canada College from 1890 to 1896, only pupils of that school are eligible for the scholarship. This award will be made by a board consisting of the Provost of Trinity College with the Principal and the Classical Master of Upper Canada College to such candidate as, without written examinations, shows evidence of possessing good scholarship in Classics, as well as manliness, a sense of honour, and a strong moral character. Failing a suitable candidate in Classics, the Board may at its discretion select one in Modern Languages, though it is not under any obligation to make a selection in any given year

Successful candidates must pursue a course of study in Classics or Modern Languages to the satisfaction of the Board. In case of necessity, to be by it determined, the Board may allow a postponement of the time of beginning the course or an interruption of the same.

The scholarship is worth \$500, \$125 will be paid to successive holders at the end of each Term in the First and Second Years.

#### THE COOPER EXHIBITION

- T. These two exhibitions, founded by the Rev. C. W. Cooper, of the value of \$100 each, are open to any matriculated student of Trinity College not holding a scholarship, with a preference to the sons of clergymen. The exhibitioners are nominated by the Most Reverend the Lord Bishop of Toronto.

#### CORPORATION BURSARIES

- T. The Corporation has provided that five Bursaries of a value of \$50 per annum be open every year for a period not exceeding three years. Any student who shall have passed the Matriculation examination, and shall have satisfied the Executive Committee that he cannot without the aid thus afforded, avail himself of the advantage of a University education, will be eligible for a bursary, provided that he is not the holder of a scholarship or exhibition. *Ceteris paribus* the sons of clergymen will be preferred.

Scholarships, exhibitions and bursaries will be forfeited if the holder fails to keep a term, or to pass any examination at the regular time.

- M. The Silver Episcopal Jubilee Scholarship, the gift of the Toronto Subdivision of the Catholic Women's League of Canada, in honour of the Silver Jubilee of the Most Rev. Neil McNeil, Archbishop of Toronto, of the value of \$100.

This Scholarship open for competition only to women students residing in Toronto

#### DAUGHTERS OF THE EMPIRE BURSARY

The Imperial Order, Daughters of the Empire, has established a War Memorial Bursary in each province of the Dominion, of the value of \$300 a year for four years, to be awarded to the candidate in either the Pass or the Honour Matriculation examinations who, in the judgment of the Committee, best meets the purpose in view in the foundation of the Bursary. The candidate must be the son or daughter of a killed or totally disabled soldier, sailor or member of the Air Force. In case the holder of the Bursary for the Province of Ontario elects to study at the University of Toronto his fees will be remitted to the extent of \$25 a year provided the student has passed satisfactorily his examinations for the preceding year.

Information respecting the Ontario Bursary may be obtained from the Provincial Educational Secretary, I O D. E., Y W. C. A. Building, Main Street, Hamilton, Ontario, from whom forms of application may be secured.

## PRESCRIPTION OF COURSES

## PASS MATRICULATION

## GREEK

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of simple narrative passages similar to the Xenophon prescribed.

Questions on Greek accidence and on the common rules of Greek syntax to test the candidate's accuracy and comprehension in such matters as are needful for the intelligent reading of his texts.

The following are the prescribed texts:—

1926. Xenophon, Philpotts and Jerram, *Easy Selections from Xenophon*, chaps. 3, 4, 5, Rennie's *Selections from Homer* (Edward Arnold, London), *Odyssey*, I, 113-177, V, 291-327, VI, 71-126; IX, 437-472, XII, 165-200, XIV, 1-54, XVII, 290-327; XXII, 1-41

1927. Xenophon, Philpotts and Jerram, *Easy Selections from Xenophon*, chaps. 3, 4, 5, Rennie's *Selections from Homer* (Edward Arnold, London), *Iliad*, I, 148-192, 223-246 and 345-363; III, 139-190, VI, 369-502; XXII, 273-363.

1928. The same as 1926

Two papers will be set (1) Prescribed texts; (2) translation at sight, accidence and syntax

## LATIN

Translation at sight of passages of average difficulty from Cæsar, upon which special stress will be laid

Translation, with questions, from a prescribed portion of Virgil's *Æneid*.

Examination (not to include translation) upon a short prescribed portion of Cæsar, to test the candidate's knowledge of Latin Syntax.

Questions on Latin accidence.

Translation into Latin of English sentences involving a knowledge of the vocabulary and constructions found in the Ontario High School Latin Book, pages 1-420, omitting all the sections after 500 which are printed in small type, and also the following. 530, 554, 563 (c), 630, 631, 632, 635, 637, 665, 672, 674

The following are the prescribed texts:—

1926: Caesar, *The First Invasion of Britain*—High School Latin Reader, Part IV (Macmillan), Selections from Virgil (W. J. Gage & Co.) Sections 1, 6, 8, 9, 11, 13, 14, 15

1927: Caesar, *The Second Invasion of Britain*—High School Latin Reader, Part V (Macmillan), Selections from Virgil (W. J. Gage & Co.) Sections 1, 5, 7, 10, 12, 17.

Two papers will be set (1) Latin Authors, including Virgil, Caesar and Sight Translation, (2) Latin Composition and Grammar

## ENGLISH

**COMPOSITION:** An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and idiomatic and grammatical construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.

**LITERATURE:** Such questions only will be set as may serve to test the candidate's familiarity with, and intelligent and appreciative comprehension of, the prescribed texts. The candidate will be expected to have memorized the passages prescribed below. In addition to the questions on the prescribed selections, others will be set on a "sight passage" to test the candidate's ability to interpret literature for himself.

The candidate shall produce satisfactory proof, by the certificate of the principal of the school from which he comes or otherwise, that he has read carefully, during the preceding year, at least four suitable works in English literature (both prose and poetry) in addition to those prescribed below for examination.

One examination paper.

The following are the prescribed texts —

1926. Intensive work—Shakespeare, *Julius Caesar*; extensive work—Part II of *Collection of Shorter Poems*

1927. Intensive work—Shakespeare, *Macbeth*; extensive work—Part III of *Collection of Shorter Poems*.

1928: Intensive work—Shakespeare *Henry V*; extensive work—Part IV of *Collection of Shorter Poems*

PASSAGES FOR MEMORIZATION

1926.

Shakespeare, Julius Caesar:

- Act I, Sc. 1, ll. 40-60 O you hard hearts . . . on this ingratitude.  
 Act III, Sc. 1, ll. 148-163 O mighty Caesar . . . spirits of this age  
 Act III, Sc. 2, ll. 173-196 If you have tears . . . flourished over us.  
 Act IV, Sc. 2, ll. 19-27 Thou hast described . . . in the trial  
 Act V, Sc. 5, ll. 68-75 This was the noblest . . . was a man.

Collection of Shorter Poems—Part II Byron, "There was a sound of revelry" (ll. 1-45), Tennyson, "You ask me why", St Agnes' Eve; Hardy, "When I set out for Lyonesse"; Lang, Good-bye; Yeats, The Lake Isle of Innisfree; De la Mare, The Scribe, Carman, An April Morning.

1927:

Shakespeare, Macbeth

- Act I, Sc. 5, ll. 16-31 Glamis thou art . . . crowned withal  
 Act II, Sc. 7, ll. 1-28 If it were done . . . on the other  
 Act I, Sc. 1, ll. 33-64 Is this a dagger . . . to hell.  
 Act III, Sc. 2, ll. 4-26 Nought's had . . . him further.  
 Act III, Sc. 2, ll. 45-56 Be innocent . . . go with me.  
 Act V, Sc. 3, ll. 22-28 I have lived dare not  
 Act V, Sc. 3, ll. 39-45 Cure her . . . the heart.  
 Act V, Sc. 5, ll. 16-28 The Queen . . . signifying nothing

Collection of Shorter Poems—Part III "It is not to be thought of", "A weary lot is thine", Pibroch of Donald Dhu, "The splendour falls", Far-Far-Away, The Passing of Spring

1928:

Shakespeare, Henry V

- Act I, Sc. 1, ll. 1-18 O for a muse . . . imaginary forces work  
 Act III, Sc. 1, ll. 1-34 Once more into the breach . . . and St. George.  
 Act IV, Sc. 3, ll. 40-67 This day is called . . . St. Crispian's Day.

Collection of Shorter Poems—Part IV The Tiger, Song ("The sun upon the lake"), "You ask me why", St Agnes' Eve, When I set out for Lyonesse, The Lake Isle of Innisfree, The Scribe, "When it is finished".

\*FRENCH

The candidate's knowledge of French will be tested by: (1) simple questions on grammar, (2) the translation of simple passages from English into French; (3) translation at sight of easy passages from modern French, and (4) an examination on the following texts.—

\*When the edition is not specified, any unabridged edition may be used.

The texts contained in the New High School French Reader.

1926. Daudet, *La Belle Nivernaise* (Heath & Co.), Moinaux, *Les deux Sourds*

1927. Daudet, *Le Petit Chose à l'école* (Blackie Edition), Labiche, *Les Petits Oiseaux*.

1928. Audoux, *Marie Claire à Villevielle* (Clarendon Press); Labiche, *Le Voyage de Monsieur Perrichon*

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar, (2) the translation of English into French.

### \*GERMAN

The candidate's knowledge of German will be tested by: (1) simple questions on grammar, (2) the translation of simple passages from English into German, (3) translation at sight of easy passages from modern German; and (4) an examination on the following texts:—

The texts contained in the High School German Reader with the exception of *Von Fallersleben, Deutschland über Alles*.

1926: Gerstaecker, *Germelshausen*; Seidel, *Der Unsichtbare* (Blackie), Elz, *Er ist nicht eifersüchtig*

1927: Storm, *Immensee*; Fulda, *Unter vier Augen*.

1928: Arnold, *Fritz auf Ferien*; Ebner-Eschenbach, *Krambambuli*; Benedix, *Der Prozess*

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into German.

### SPANISH

The candidate's knowledge of Spanish will be tested by: (1) questions on grammar; (2) the translation of sentences and connected narrative from English into Spanish, (3) composition in Spanish, (4) translation at sight from Spanish, (5) an examination on the following text:—

1926, 1927: Benavente, *El Príncipe que todo lo aprendió en los libros* (World Book Co.); Hills and Cano, *Cuentos y leyendas* (Heath & Co.).

1928 Hills and Cano, *Cuentos y leyendas* (Heath & Co.); Selgas, *La Mariposa blanca* (Heath & Co.).

Two papers will be set. (1) Prescribed text and translation at sight, questions on grammar; (2) the translation of English into Spanish and composition

### ITALIAN

The candidate's knowledge of Italian will be tested by: (1) questions on grammar; (2) the translation of sentences and connected narrative from English into Italian; (3) translation at sight from Italian; (4) an examination on the following text:—

\*When the edition is not specified any unabridged edition may be used.

1926, 1927 Bowen, Italian Reader (Heath & Co.) Goldoni, *La Locandiera* (Heath & Co.)

1928. Bowen, Italian Reader (Heath & Co.); Goldoni, *Il vero amico* (Heath & Co.).

Two papers will be set: (1) Prescribed text and translation at sight; (2) questions on grammar and translation of sentences illustrating the grammar.

## HISTORY

BRITISH HISTORY.—Great Britain from 1688 to 1920. The geography relating to the history prescribed. One examination paper.

NOTE.—The following sections of the course given below are obligatory, viz., 1, 4, 5, 6, and 15. Candidates must also take one of the options in each of (a) and (b) below.

(a) Section 2 and section 3; or section 13 and section 14.

(b) Sections 7, 8 and 9, or sections 10, 11, and 12.

1. Political development 1688 to date:

The Bill of Rights, the significance of the Revolution of 1688

Origin and development of parties and party government

Biographical sketches of the great Prime Ministers Walpole; Pitt, Jr.; Grey; Russell, Melbourne, Peel, Palmerston; Gladstone, Disraeli; Salisbury, Balfour, Asquith; Lloyd George.

Extension of the franchise The Reform Bills of 1832, 1867, 1884, 1918, etc.

Restriction of the powers of the House of Lords.

2 The American Revolution.

3 The French Revolution, the war with France, 1793-1802; the struggle with Napoleon.

4. The Industrial Revolution.

5. The development of the British Empire in territory and in government.

6. The social life of the people.

(a) Phases: agriculture, commerce, industry, transportation, class distinctions, amusements

(b) Legislation, e.g., Factory Acts

7. Literature.

8 Education in the 19th and 20th centuries

9 Religion.

10. Ireland.

11. External relations, including brief study of nations concerned.

12. The British Navy The place of sea-power in the development and maintenance of the British Empire.

13. The Great War, especially the part played by the British Empire.

14. The League of Nations

15. Civics.



Government, with special emphasis on provincial, federal, and imperial government.

A study of the following aspects of the production and distribution of wealth.

- (a) The dependence of the citizen upon others for the wealth he uses.
- (b) Co-operation and division of labour.
- (c) The effects of industrial development upon community life.
- (d) The distribution of wealth in wages, salaries, profits, dividends, interest, and rent.
- (e) Saving.
- (f) What the government does to regulate the production and distribution of wealth.
- (g) Voluntary organizations aiding or regulating industry.

#### BOOKS OF REFERENCE

The following books will be found useful for supplementary reading on the topics of the course, and should be placed in every High School library: Mowat, *A new History of Great Britain*, Parts II and II, Oxford Press; Gardiner, *A Student's History of England*, Longmans (or Part III, which deals with the period 1689-1919); McCarthy, *England in the Nineteenth Century*, 2 vols., Putnam; Trevelyan, *British History in the Nineteenth Century*, Longmans, Bell's English History Source Books, Vols. VII-XI, 1714-1887, G. Bell & Sons; Kendall, *Source Book of English History*, Macmillan, *Piers Plowman Social and Economic Histories*, Vols. V, VI, VII, George Philip & Son, London; Cheney, *Industrial and Social History of England*, Macmillan, Hamilton, *How the Fight was Won*, Ontario Department of Education, *Everyman's Literary and Historical Atlas of Europe*, Dent; Philip's Junior Historical Atlas, George Philip & Son.

**ANCIENT HISTORY.**—General outlines of the History of Greece to the death of Alexander and of the history of Rome to the death of Augustus, with a brief outline of the art, literature, philosophy, and social life of the Greeks and Romans. The geography relating to the history prescribed. One examination paper.

**GREECE**—The Early Greek World. effects of geographical features; earlier civilizations; first period of colonization; Homeric age; story of Troy; the City State; life of the people; contributions to later Greek civilization.

Period of Development. colonial expansion; rise of Sparta; classes of society; government. aristocratic constitution, myth of Lycurgus; strength and weakness; rise of Athens to Democracy, abolition of monarchy, the aristocracy (general statement only); Draco, Solon, the tyranny; Pisistratus; the democracy (general statement only), Cleisthenes; Intellectual awakening. The struggle for freedom: war with Persia; conquest of Asiatic Greece; Marathon; Themistocles; the navy; invasion under

Xerxes: Thermopylae, Salamis, historic importance of Marathon, results of struggle on Athens.

The Athenian Empire: confederacy of Delos, government under Pericles; the Golden age, social conditions of people, strength and weakness of Athenian democracy, our debt to Athens.

Discord and Decline: the Peloponnesian Wars (no details regarding battles) Causes: direct; indirect. First stage: land power versus sea power, death of Pericles. Second stage: the Sicilian expedition, Alcibiades. Downfall of Athens. Lysander, terms of peace. Leadership of Sparta (in brief outline). expedition of Cyrus, retreat of the "Ten Thousand"; Xenophon, effects of Spartan violence; Liberation of Thebes; Pelopidas, battle of Leuctra; significance. Leadership of Thebes Epaminondas; battle of Mantinea. Rise of Macedon: the country and people. Philip: Thebes and Philip; Philip and his army, war with Athens. Chaeromea; Demosthenes. Greece under Philip. Alexander: education; conquests: battle of Issus; founding of Alexandria, battle of Arbela, organization of Empire; death and character; results of his conquests. Contribution of Hellas to civilization: art; literature; philosophy.

ROME.—Early Italian world: effects of geographical position, physical features of Italy; tribes of Italy; legendary beginning of Rome (without details of kings). Rome under the kings: family life, religion; social classes; government. The early Republic: the aristocratic Republic, struggle with the Plebs. The charters of Liberty (without details): the twelve tables, Licinian laws, Hortensian laws; the Roman democracy (general statement only). Early struggle for existence: stories of Cincinnatus and Camillus. Conquest of Italy. Latin and Samnite wars (no details); causes of Rome's success. Italy organized under Rome (general statement only). social conditions. The Punic wars: the First Punic war. The Carthaginian Empire: comparison with Rome. Struggle for Sicily: outline of events, results. The Second Punic war, the Carthaginians in Spain, the invasion of Italy, Hannibal's victories in outline, conquest of Spain by Scipio, battle of Zama, results of the war. The Third Punic war, destruction of Carthage, Carthage a Roman province. The conquest of the East: the struggle with Macedonia (general statement only), destruction of Corinth; Greece a Roman province, war with Syria, effects of conquests on art and literature; on customs and religion; on social conditions; on political organization. Growth of Plutocracy: evil effects, Cato. Period of Civil Strife—Military Rule: causes of strife (see previous chapter), the reforms of the Gracchi. Marius, the rise of Marius, Jugurtha; the social war. Sulla: the Mithridatic wars, the Sullan constitution, first Civil war; senate made supreme. Rise of Pompey. Sertorius, Spartacus, Pompey as consul, conquests in the east; conspiracy of Catiline, Cicero; the first Triumvirate. Rise of Caesar, conquests in Gaul; second Civil War, cause; defeat of Pompey, Caesar's government and death; Caesar's

reforms. Founding of the Empire Caesar's heir, the second Triumvirate, defeat of Antony, government under Augustus, the Augustus policy: extent of the empire. The Augustine Age: literature, public works; birth of Christ.

#### BOOKS OF REFERENCE

The following books will be found useful for supplementary reading on the topics of the course, and should be placed in every High School library: Drexler, *Ancient Times*, Ginn & Co.; Botsford, *A History of Greece*, Macmillan, Pelham, *Outlines of Roman History*, Putnam; Havell, *Republican Rome*, Ballantyne Press; Cotterill, *Ancient Greece*, Ballantyne Press; Botsford, *A Source Book of Ancient History*, Macmillan; Munro, *A Source Book of Roman History*, Heath & Co.; Fling, *A Source Book of Greek History*, Heath & Co.; Translations of the histories of Herodotus, Thucydides, Polybus and Livy, Ginn's Classical Atlas, Ginn & Co

#### MATHEMATICS

ALGEBRA.—Elementary rules; factoring; highest common measure; lowest common multiple; fractions, simple equations of one, two and three unknown quantities; extraction of roots; more advanced factoring; simple graphs; simple ratio and proportion; indices; surds; quadratics of one and two unknown quantities; theory of quadratics.

One examination paper.

GEOMETRY.—A.—CONSTRUCTIONS.

To construct a triangle with sides of given lengths

To construct an angle equal to a given rectilineal angle.

To bisect a given angle.

To bisect a given straight line.

To draw a straight line perpendicular to a given straight line from a given point in it.

To draw a straight line perpendicular to a given straight line from a given point not in the line.

Locus of a point equidistant from two given straight lines.

Locus of a point equidistant from two given points.

To draw a straight line parallel to another, through a given point.

To divide a given straight line into any number of equal parts.

To describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

On a given straight line to describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

- To find the centre of a given circle.
- From a given point to draw a tangent to a given circle.
- On a given straight line to construct a segment of a circle containing an angle equal to a given angle
- From a given circle to cut off a segment containing an angle equal to a given angle.
- In a circle to inscribe a triangle equiangular to a given triangle.
- To find locus of centres of circles touching two given lines.
- To inscribe a circle in a given triangle.
- To describe a circle touching three given straight lines.
- To describe a circle about a given triangle.
- About a given circle to describe a triangle equiangular to a given triangle.
- To divide a given straight line similarly to another given divided straight line.
- To find the fourth proportional to three given straight lines
- To describe a polygon similar to a given polygon, and with the corresponding sides in a given ratio.
- To find the mean proportional between two given straight lines.
- To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.
- To describe a polygon of a given shape and size.

#### B.—THEOREMS.

- The sum of the angles of any triangle is equal to two right angles.
- The angles at the base of an isosceles triangle are equal, with converse.
- If the three sides of one triangle be equal, respectively, to the three sides of another, the triangles are equal in all respects.
- If two sides and the included angle of one triangle be equal to two sides and the included angle of another triangle, the triangles are equal in all respects.
- If two angles and one side of a triangle be equal to two angles and the corresponding side of another, the triangles are equal in all respects.
- If two sides and an angle opposite one of these sides be equal, respectively, in two triangles, the angles opposite the other pair of equal sides are either equal or supplemental.
- The sum of the exterior angles of a polygon is four right angles.
- The greater side of any triangle has the greater angle opposite it
- The greater angle of any triangle has the greater side opposite it.
- If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base, with converse.
- If a transversal fall on two parallel lines, prove the relations between angles formed, with converse
- Lines which join equal and parallel straight lines towards the same parts are themselves equal and parallel.
- The opposite sides and angles of a parallelogram are equal and each diagonal bisects it.

Parallelograms on the same base, or on equal bases, and between the same parallels are equal.

Triangles on the same base, or on equal bases, and between the same parallels are equal.

Triangles equal in area, and on the same base, are between the same parallels.

If a parallelogram and a triangle be on the same base, and between the same parallels, the parallelogram is double the triangle.

Find expressions for area of a parallelogram, and the area of a triangle.

The complements of the parallelograms about the diagonal of any parallelogram are equal.

The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

If a straight line be divided into any two parts, the sum of the squares on the parts, together with twice the rectangle contained by the parts, is equal to the square on the whole line.

The square on a side of any triangle is equal to the sum of the squares on the two other sides  $\pm$  twice the rectangle contained by either of these sides and the projection of the other side on it.

If more than two equal straight lines can be drawn from the circumference of a circle to a point within it, that point is the centre.

The diameter is the greatest chord in a circle, and a chord nearer the centre is greater than one more remote. Also the greater chord is nearer the centre than the less.

The angle at the centre of a circle is double the angle at the circumference on the same arc.

The angles in the same segment of a circle are equal, with converse.

The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles, with converse.

The angle in a semicircle is a right angle, in a segment greater than a semicircle less than a right angle; in a segment less than a semicircle greater than a right angle.

A tangent to a circle is perpendicular to the radius at the point of contact; only one tangent can be drawn at a given point on the circumference; the perpendicular to the tangent at the point of contact passes through the centre; the perpendicular from centre on tangent passes through the point of contact.

If two circles touch, the line joining the centres passes through the point of contact.

The angles which a chord drawn from the point of contact makes with the tangent, are equal to the angles in the alternate segments.

The rectangles under the segments of intersecting chords are equal.

If  $OAB$  and  $OC$  be two straight lines, and  $OA \cdot OB = OC^2$ ,  $OC$  is a tangent to the circle through  $A$ ,  $B$ , and  $C$ .

Triangles of the same altitude are as their bases.

A straight line parallel to the base of a triangle divides the sides proportionally, with converse.

If the vertical angle of a triangle be bisected, the bisector divides the base into segments that are as the sides, with converse.

The analogous proposition when the exterior angle at the vertex is bisected, with converse.

If two triangles are equiangular, the sides are proportional.

If the sides of two triangles are proportional, the triangles are equiangular.

If the sides of two triangles about equal angles are proportional, the triangles are equiangular.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplementary.

Similar triangles are as the squares on corresponding sides.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two triangles which are similar to the original triangle.

In equal circles angles, whether at the centres or circumferences, are proportional to the arcs on which they stand.

The areas of two similar polygons are as the squares on corresponding sides.

If three straight lines be proportional, the first is to the third as the figure on the first to a similar figure on the second.

Questions and easy deductions on the preceding constructions and theorems.

It is recommended that the study of formal demonstrative Geometry be preceded by a course in Practical Geometry, extending over not more than a year, and embracing the following:—

Definitions: fundamental geometric conceptions and principles; use of simple instruments, as compasses, protractor, graduated rule, etc.; measurement of lines and angles, and construction of lines and angles of given numerical magnitude; accurate construction of figures, some leading propositions in plane geometry reached by induction as a result of accurate construction of figures; deduction also employed as principles are reached and assured. At the examination, questions may be given in Practical Geometry, the constructions being such as naturally spring from the prescribed course. Candidates must provide themselves with a graduated ruler, compasses, set-square and protractor.

In the formal deductive Geometry modifications of Euclid's treatment of the subject will be allowed, though not required, as follows.—

The employment of the "hypothetical construction".

The free employment of the method of superposition including the rotation of figures about an axis, or about a point in a plane.

A modification of Euclid's parallel postulate.

A treatment of ratio and proportion restricted to the case in which the compared magnitudes are commensurable.

One examination paper.

### EXPERIMENTAL SCIENCE

**CHEMISTRY:**—An experimental study of the following elements and their more important compounds. hydrogen, oxygen, sulphur, sodium, potassium, nitrogen, chlorine, bromine, iodine, carbon, calcium. The course of work should be arranged so as to give the pupils a knowledge of the following: Mixtures, solutions, compounds, and elements, and their various properties and reactions; acids, bases, and salts. Fundamental laws and principles, as conservation of mass, definite proportions, multiple proportions, valency, proportions by volume in which gases react. The quantitative meaning and use of chemical symbols, formulae and equations. Chemical nomenclature. Simple quantitative experiments and problems. The application of chemistry to the industries, illustrated by an account of the commercial manufacture and use of some of the more important substances included in this course.

**PHYSICS:**—A course defined as follows, the topics to be presented experimentally with mathematical applications simple and direct in character.

**SOUND:**—Vibratory motion illustrated with pendulums, rods, strings, membranes, and plates.

Types of wave motion illustrated by water waves, waves in a cord, and waves in a coiled spring.

Production, propagation, velocity, and reflection of sound waves; wave lengths.

Intensity, pitch.

Laws of vibration of strings; vibration of air in organ pipes; nodes and loops in vibrating strings, and in vibrating air columns, harmonies, quality, manometric flames

Interference phenomena, beats.

Resonance.

**HEAT:**—Sources of heat: Transformation of other forms of energy into heat energy.

Expansion due to heat: Anomalous expansion of water and its importance in nature, expansion of gases; Charles' Law.

Temperature and thermometers: Construction and graduation of Centigrade and Fahrenheit thermometers, measurement of temperature on absolute scale.

Quantity of heat: Temperature as contrasted with quantity of heat, heat units; specific heat; determination of the specific heat of a solid and of a liquid.

Fusion: Determination of melting point of ice, heat changes in solution, determination of heat of fusion of ice, the influence of salt in solution on the freezing point.

**Vaporization:** Determination of heat of vaporization of water, dependence of boiling point on pressure and on the presence of salts in solution; evaporation; practical applications of cooling by vaporization; ice machine.

**Transference of heat:** Conduction and convection, as illustrated in systems of heating by hot water and by steam; ventilation, radiation; radiant energy, effect of temperature and nature of surface, emission and absorption, selective absorption.

The transformation of heat energy into the energy of mechanical motion as exemplified in the steam engine and in the gas engine.

Heat in connection with meteorology; clouds; rain; winds, dew, frost; dew point; hygrometers (Regnault's and the wet and dry bulb hygrometer).

Nature of heat: Kinetic theory.

**LIGHT.**—Propagation: Wave theory of light; rectilinear propagation, image through a pin-hole; photometry, shadow and grease-spot photometers.

**Reflection:** Laws of reflection; images in plane mirrors, images in spherical mirrors, drawing image of object in any position.

**Refraction.** Laws of refraction, index of refraction, its measurement, and its relation to the velocities of light in media, total reflection.

**Lenses:** Converging and diverging; determination of focal length, conjugate foci, drawing of images produced by lenses; vision through a lens, relation of the size of the image to the size of the object.

**Optical instruments:** Simple microscope; camera, projection lantern.

**Colour.** Decomposition and recomposition of white light; spectrum, complementary colours, rainbow.

**MAGNETISM AND ELECTRICITY.**—Magnetism: Laws of magnetic attraction and repulsion; magnetic field, magnetic lines of force, magnetism by induction, magnetization, molecular theory of magnetization; magnetic permeability, terrestrial magnetism, mariner's compass, inclination and declination of the magnetic needle.

**Electricity at rest:** Two kinds of electrification, conductors and non-conductors; gold-leaf electroscope; induced electrification; electricity at points and at surfaces; lightning rods, the Leyden jar, simple notions of electrical potential

**Electric current.** Production of electric current by voltaic cells, electromotive force of a voltaic cell; detection of the electric current; polarization and local action, simple notions of the relation of electromotive force, current strength, and resistance, names of units, Leclanche cell, dry cell, Daniell cell.

**Effects of the electric current:** Electrolysis, theory of electrolysis, electroplating, electrotyping, storage cell, laws of electrolysis, measurement of current strength by electrolysis, magnetic effects, electromagnet, relation between the direction of the current and the polarity of an electromagnet, the electric telegraph, the electric bell, the galvanometer, the D C. motor,



heating effects of the current, practical applications, electric stoves, electric irons, electric heaters, electric welding; incandescent and arc lamps.

Induced currents: Production of induced currents, laws of induced currents; Lenz's Law, the transformer; the induction coil, the telephone, a simple type of the A.C. and of the D.C. dynamo. Reasons for the use of the A.C. current, differences in the uses of the A.C. and D.C. current, distribution of electricity as illustrated by the Hydro-Electric System.

Electric measurements: Units of current strength, resistance, and electromotive force; Ohm's Law, measurement of current strength, the ammeter; measurement of electromotive force, the voltmeter, measurement of resistance, the Wheatstone Bridge.

Special forms of radiation: Electric waves, wireless telegraphy.

## AGRICULTURE

### PART I

#### AGRICULTURAL PHYSICS

SOIL.—Classification and identification of samples of soil by the "beaker" method into clay, loam, clay loam, sandy loam and sand; comparison of two soils by the aid of a compound microscope, identification and study of soil in the fields; experiments to show the physical effects of lime on heavy and on light soil; influence of air, cultivation and drainage on the action of lime.

Tillage: Uses of plow, cultivator, scuffer, harrow and roller; experiments to show the use of mulches, and the action of frost on heavy soil.

Drainage: Methods and value; calculation of cost of tile drainage of a given area.

SURVEYING.—Use of instruments (including level and chain) for taking levels, running lines, calculation of areas.

FARM MECHANICS.—Care of tools and farm implements; experiments to show warping and splitting of wood on exposure to the weather; practice in sharpening such tools as chisel, knife and scissors; the use of levers and pulleys in machinery; principle of the internal-combustion engine.

ELECTRICITY.—Electricity at Rest: Two kinds of electrification; conductors and non-conductors; gold leaf electroscope; induced electrification; electricity at points and surfaces; the Leyden jar; lightning-rods.

Current Electricity: Principle of voltaic cells; use of dry cells galvanometer; detection of the current, simple notions of electro-motive force, current strength and resistance including names of units; electro-magnet; relation between the direction of the current and the polarity of a magnet; telegraph, electric bell; electric appliances—irons, stoves, welders, lamps; production of induced currents; laws of induced currents; the induction coil and transformer.

## AGRICULTURAL CHEMISTRY

GENERAL.—A brief experimental study of the following elements: carbon, oxygen, hydrogen, nitrogen, phosphorus, sulphur, potassium, calcium, and the compounds of these elements used by green plants; chemical symbols, formulae and equations; chemical nomenclature.

Note.—It is intended that the student through experimental study shall become familiar with the above mentioned elements and their compounds which have direct bearing upon agriculture.

SOILS.—Experiments to show how the insoluble compounds of the soil containing calcium and phosphorus may be made soluble (e.g., the action of carbon dioxide and water on calcium carbonates and phosphates), a study of the amount of plant food constituents in soil, the necessity of an abundance of humus and lime (compounds of calcium); nitrification; means of getting nitrogen into the soil, special influence of nitrogen, phosphorus, and potassium compounds on the growth of plants, influence of period of growth, range of root, and ability of plants to assimilate food, on the problem of the manuring for different crops.

BARNYARD MANURE AND FERTILIZERS.—Composition, care and treatment of barnyard manure, commercial sources of nitrogen, phosphorus and potassium used to supplement barnyard manure; experiments to prove the presence of and to show the relative solubility of the three plantfood elements in these materials and why certain of the materials should not be mixed; calculation of the percentage of available plantfood in different mixtures of fertilizer materials; explanations of the commercial terms "phosphoric acid" and "potash". The chief provisions of the Fertilizer Act

INSECTICIDES AND FUNGICIDES.—An experimental study of arsenate of lead, arsenate of lime, Paris green, lime-sulphur, Bordeaux mixture, and orchard "dusts", why some insecticides and fungicides cannot be used in combination.

## PART II

BOTANY.—Calculation of the percentage of foul seed in three or four samples of clover (or alfalfa) and timothy; use of compound microscope in examining spores and mycelia, recognition, from specimens, of rusts, smuts, white rust of crucifers, brown rot of stone fruits, mildew of cherry or lilac and anthracnose of bean. Chief provisions of Seeds Control Act and Noxious Weeds Act

ENTOMOLOGY.—Identification, nature of injury, life history and methods of control of any six of the most common harmful insects of the district, e.g., white grub, wire worm, plum curculio, codling moth, San José scale, oyster shell scale, cabbage maggot, cabbage worm, Hessian fly, European corn borer, potato beetle, and clothes moth.

POULTRY.—Practical operation of the incubator—ventilation, moisture, candling eggs, variation in size of air chamber, blood clots, development

of the embryo by examining eggs broken open every one or two days during the period of incubation, use of water-glass in preserving eggs; poultry products and marketing

**DAIRYING**—Principles and uses of the Babcock machine and the lactometer, testing cream and skim milk (or whey) for fat; determining whether milk has been watered by use of the formula— $(L.R. \text{ at } 60^{\circ} \text{ plus } \% \text{ of fat}) \div 1 = \% \text{ S.N.F.}$ ; food value of milk and its products, principle and use of the milk separator, making butter with a laboratory churn, use of starters

**FIELD CROPS**—Different types of farming; crop distribution over Ontario; meaning and importance of crop rotation; influence of the keeping of live stock on the kind of rotation, germination tests of seed, e.g., oats, turnips, corn, clover, laboratory work in seed judging and seed selection; meaning and merits of pasture crops, silage crops and soiling crops, the yield and quality of crop as influenced by the time of sowing, calculation of the relative value of certain crops as "money" crops.

**ANIMAL HUSBANDRY**.—History and characteristics of the chief breeds of horses, cattle, sheep, swine, value and importance of live stock; a survey of the breeds found in the locality; meaning of pedigree stock and grade stock, disadvantage of keeping scrub stock; visit to a local farm to study the stock kept there

Or

**HORTICULTURE**—Orchard management—spraying, pruning, grafting, cultivating; cover crops, packing and marketing apples; methods of producing early vegetables; practice in seeding, transplanting, cultivating mulching; fruit survey for at least two kinds of fruit.

## HONOUR MATRICULATION

### GREEK

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of prose passages of average difficulty from Xenophon's historical works.

Translation into Greek of sentences (based upon Xenophon's vocabulary) to test the candidate's scholarship in matters of accidence, syntax and phraseology.

The following are the prescribed texts:—

1926, 1927, 1928: Xenophon, *Hellenica* (Philpotts' Selections, sections I, II, and III); Herodotus, *Salamis* (Edwards), Rennie's Selections from Homer (Edward Arnold, London), *Iliad* I, 148-192, 223-246, 345-363, III, 139-190; VI, 369-502, XXII, 273-363; *Odyssey* I, 113-177, V, 291-327; VI, 71-126; IX, 437-472, XII, 165-200; XIV, 1-54; XVII, 290-327; XXII, 1-41.

Two papers will be set: (1) prescribed texts, (2) translation at sight and Greek prose composition.

### LATIN

Translation into English of passages from prescribed texts, with grammatical questions on these passages and such other questions as arise naturally from the context

Translation at sight of a passage of average difficulty from Caesar.

Translation into Latin of English sentences to illustrate Latin syntax, and of a continuous passage of English narrative similar to Caesar.

The following are the prescribed texts:—

1926. Caesar, *De Bello Gallico*, Book V, chaps. 24-58, Cicero, *In Catilinam* I; Horace, *Odes* as follows. Book I, 1, 4, 5, 8, 9, 10, 14, 22, 24, 38; Book II, 3, 7, 10, 14, 20, Book III, 1, 3, 5, 8, 9, 13, 16, 21, 23, 30; Book IV, 3, 5, 7, 15.

1927: Caesar, *De Bello Gallico*, Book V, chaps. 24-58, Cicero, *In Catilinam* I; Horace, *Odes* as follows. Book I, 1, 4, 5, 9, 21, 22, 24, 20, 31, 37, 38; Book II, 3, 10, 13, 14, 16, Book III, 1, 2, 5, 7, 9, 13, 18, 23, 29, 30, Book IV, 3, 5, 7.

1928 The same as 1926.

Two examination papers

(1) Latin Prose Composition and Caesar.

(2) Cicero, Horace and Sight Translation.

### ENGLISH

COMPOSITION: An essay on one of several themes set by the examiners.

One examination paper.

LITERATURE: The candidate will be expected to have memorized some of the finest passages. Besides questions to test the candidate's familiarity with, and comprehension of, the following selections, questions may also be set to determine within reasonable limits his power of appreciating literary art.

The candidate shall produce satisfactory proof by the certificate of the principal of the school from which he comes or otherwise that he has read carefully, during the preceding year, at least four suitable works in English literature (both prose and poetry) in addition to those prescribed below for examination.

1926: Intensive work—Shakespeare, *Julius Caesar*; Milton, *L'Allegro*; Coleridge, *The Rime of the Ancient Mariner*; Keats, *The Eve of St Agnes*, Tennyson, *Ode on the Death of the Duke of Wellington*. Extensive work—Shakespeare, *A Midsummer Night's Dream*, Dickens, *David Copperfield*; Part II of *Collection of Shorter Poems*

1927 Intensive work—Shakespeare, *Macbeth*, Tennyson, *The Lotus Eaters*, Ulysses; Arnold, *Sohrab and Rustum*, Browning, *Love Among the Ruins*, Byron, *The Prisoner of Chillon*. Extensive work—Shakespeare, *As You Like It*; Scott, *Kenilworth*; Part III of *Collection of Shorter Poems*

1928 Intensive work—Shakespeare, *Henry V.*, Tennyson, *Morte d'Arthur*, *The Brook*; Browning, *Andrea del Sarto*, Wordsworth, *Michael*; Arnold, *Rugby Chapel*. Extensive work—Shakespeare, *Twelfth Night*; Scott, *Quentin Durward*, Part IV of *Collection of Shorter Poems*

#### PASSAGES FOR MEMORIZATION

1926

Shakespeare, *Julius Caesar*

- Act I, Sc 1, ll 40-69 O you hard hearts . . on this ingratitude  
 Act III, Sc 1, ll 148-163 O mighty Caesar . . spirits of this age  
 Act III, Sc 2, ll 173-193 If you have tears . . flourished over us  
 Act IV, Sc 2, ll 19-27 Thou hast described . . in the trial  
 Act V, Sc. 5, ll 68-75 This was the noblest . . was a man

Collection of Shorter Poems—Part II.

Byron, "There was a sound of revelry" (ll 1-45), Tennyson, "You ask me why", St Agnes' Eve, Hardy, "When I set out for Lyonesse", Lang, Good-bye, Yeats, *The Lake Isle of Innisfree*, De la Mare, *The Scribe*; Carman, *An April Morning*

1927

Shakespeare, *Macbeth*.

- Act I, Sc 5, ll 16-31 Glamis thou art . . crowned withal  
 Act III, Sc 2, ll 4-26 Nought's had . . him further  
 Act III, Sc 2, ll 45-56 Be innocent . . go with me.  
 Act V, Sc 3, ll 22-28 I have lived . . dare not  
 Act V, Sc. 3, ll 39-45 Cure her . . the heart  
 Act V, Sc. 5, ll 16-28 The Queen . . signifying nothing

Shakespeare, *As You Like It*

- Act II, Sc. 1, ll. 1-18 Now my co-mates . . change it  
 Act II, Sc. 5, The Songs  
 Act II, Sc. 7, ll 139-166 All the world's . . sans everything  
 Act II, Sc. 7, ll 174-190 The Songs

Collection of Shorter Poems—Part III "It is not to be thought of", "A weary lot is thine", "The splendour falls", *Far-Far-Away*.

1928:

Shakespeare, *Henry V.*

- Act I, Sc 1, ll 1-18 O for a muse . . imaginary forces work.  
 Act III, Sc. 1, ll. 1-31 Once more into the breach . . and St. George.  
 Act IV, Sc. 3, ll. 40-67 This day is called . . St. Crispian's Day.

Shakespeare, *Twelfth Night*.

Act I, Sc. 1, ll. 1-15 If music be . . . is high fantastical.

Act II, Sc. 4, ll. 113-121 A blank, my lord . . . little in our love

Collection of Shorter Poems—Part IV: The Tiger, "You ask me why",  
St Agnes' Eve, When I set out for Lyonesse, The Lake Isle of Innisfree,  
The Scribe.

#### \*FRENCH

The prescription of work in grammar, the translation of English into French and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character. The continuous passages of English for translation into French will be based on the prescribed texts.

The following are the prescribed texts:—

1926. Erckmann-Chatrian, *Madame Thérèse*

1927: Bordeaux, *La Maison*; Labiche et Martin, *La Poudre aux yeux*.

1928: Mérimée, *Colomba* (Siepmann's Advanced French Series, Macmillan), Augier et Sandeau, *Le Gendie de Monsieur Poirier* (Siepmann's French Series for Rapid Reading, Macmillan).

Two papers will be set (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into French

#### \*GERMAN

The prescription of work in grammar, the translation of English into German and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character. The continuous passages of English for translation into German will be based on the prescribed texts.

The following are the prescribed texts:—

1926: Baumbach, *Der Schwiegersohn*, Rosen, *Ein Knopf* and Muller, *Im Wartsalon erster Klasse*, from "Four German Comedies", (Ginn & Co), Collmann, *Easy German Poetry*, pp 52-107 (Ginn & Co).

1927 Rosegger, *Der Lex von Gutenhag*; Freytag, *Die Journalisten*; Collmann, *Easy German Poetry*, pp 1-52 (Ginn & Co)

1928 The same as 1926

Two papers will be set (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into German.

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\*When the edition is not specified any unabridged edition may be used

## SPANISH

The prescription of work in grammar, the translation of English into Spanish, and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1926, 1927 Ramos Carrión y Aza, Zaragueta (Silver, Burdett & Co.), Azorín, *Los Confesioneros* (Heath & Co.).

1928 Pardo Bazán, *El tesoro de Gastón* (Holt & Co.), Ramos Carrión y Aza, Zaragueta (Silver, Burdett & Co.).

Two papers will be set: (1) Prescribed text and translation at sight; questions on grammar; (2) the translation of English into Spanish and composition.

## ITALIAN

The prescription of work in grammar, the translation of English into Italian, and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1926, 1927, 1928 Willaus and Altrocchi, *Italian Short Stories* (Heath and Co.), Fogazzaro, *Poeta Roxus* (Heath and Co.).

Two papers will be set. (1) Prescribed text and translation at sight, (2) questions on grammar and translation of sentences illustrating the grammar.

## HISTORY

Modern World History from 1789 to 1920. The geography relating to the history prescribed. One examination paper.

NOTE—The following sections of the course given below are obligatory: 1, 2, 3, 7, 8, and 12. In addition candidates must take either sections 4 and 6 or section 5, and either sections 9 and 10 or section 11.

1. A brief survey of conditions at the beginning of the period: (a) political, (b) social and economic, (c) educational, (d) religious.

2. The French Revolution, 1789-1799, and its influence on other peoples.

3. The Napoleonic Era, 1799-1815, and its world results.

4. The period of reaction after 1815.

5. The Industrial Revolution from its beginnings in the first half of the eighteenth century.

6. The growth of democracy to 1850: on the continent of Europe, in Great Britain, in Canada.

7. The development of Nationalism after 1850: France, Italy, Germany, Russia, the Balkan States.

8 The growth of great empires: British Empire, German Empire, Russian Empire, France, Japan, the United States.

9 International relations: Chief alliances of European powers, the Monroe doctrine.

10 The Great War: causes, great events, results.

11 Survey of the progress of civilization during the period: political, social and economic, educational (including literature and art), scientific, religious.

12. Development of government in Upper and Lower Canada, 1789-1867, and in the Dominion of Canada, 1867-1920, as outlined in the Ontario High School History of Canada.

#### BOOKS OF REFERENCE

The following books will be found useful for supplementary reading on the topics of the course and should be placed in every High School library. Robinson and Beard, *A History of Europe: Our Own Times*, Ginn & Co.; Hazen, *Modern European History*, Holt; Hayes, *Political and Social History of Modern Europe*, 2 vols., Macmillan; Robinson and Beard, *Readings in Modern European History*, 2 vols, Ginn & Co., Matthews, *The French Revolution*, Longmans, Belloc, *The French Revolution*, Ryerson Press, Fisher, *Napoleon*, Ryerson Press, Seymour, *Diplomatic Background of the War*, Yale University Press, Robertson and Bartholomew, *Atlas of Modern European History*, Oxford University Press, Hearnshaw, *Historical Atlas of Modern Europe*, Macmillan.

#### MATHEMATICS

**ALGEBRA.**—Elementary rules; factoring; highest common measure; lowest common multiple, fractions; simple equations of one, two and three unknown quantities, extraction of roots, more advanced factoring; simple graphs, simple ratios and proportion, indices and surds; quadratics of one and two unknown quantities, theory of quadratics, theory of divisors, ratio, proportion and variation; progressions; notation, permutations and combinations; binomial theorem, interest forms, annuities and sinking funds.

One examination paper.

**TRIGONOMETRY.**—The trigonometrical ratios with their relations to one another, sines, etc., of the sum and difference of angles, with deduced formulas, use of logarithms, solution of triangles, expression for the area of triangles, inverse functions, radii of circumscribed, inscribed and escribed circles.

One examination paper.



PROBLEMS: One paper (For certain scholarship candidates only)

GEOMETRY: A candidate must take section C and either section A or section B

#### A.—SYNTHETIC GEOMETRY

Exercises on the course prescribed for the pass examination, with special reference to the following topics. loci; maxima and minima; the system of inscribed, escribed and circumscribed circles of a triangle, with metrical relations, radical axis.

The following additional propositions in Synthetic Geometry, with exercises thereon:—

To divide a given straight line internally and externally in medial section.

To describe a square that shall be equal to a given rectilineal figure.

To describe an isosceles triangle having each of the angles at the base double of the third angle.

To inscribe a regular pentagon in a given circle

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If ABC be a triangle, and A be joined to a point P of the base such that BP:PC = m:n, then  $nAB^2 + mAC^2 = (m+n)AP^2 + nBP^2 + mPC^2$ .

In a right-angled triangle the rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the two other sides.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by its opposite sides

Two similar polygons may be so placed that the lines joining corresponding points are concurrent.

If a straight line meet the sides BC, CA, AB, of a triangle ABC in D, E, F, respectively, then BD. CE. AF = DC. EA. FB, and conversely. (Menelaus' Theorem.)

If straight lines through the angular points A, B, C of a triangle are concurrent, and intersect the opposite sides in D, E, F, respectively, then BD. CE. AF = DC. EA. FB, and conversely. (Ceva's Theorem.)

If a point A lie on the polar of a point B with respect to a circle, then B lies on polar of A.

Any straight line which passes through a fixed point is cut harmonically by the point, any circle, and the polar of the point with respect to the circle.

In a complete quadrilateral each diagonal is divided harmonically by the two other diagonals, and at the angular points through which it passes.

## B—ELEMENTARY SOLID GEOMETRY

Definitions. General description of figures in three dimensions.

• The following propositions, with exercises thereon.

A plane is determined by (a) a straight line and point not on it, (b) two intersecting straight lines, (c) two parallel straight lines

Two intersecting planes cut one another in a straight line and in no other point.

If two straight lines are parallel, any plane intersecting one of them intersects the other.

If two planes are parallel, any straight line intersecting one of them intersects the other.

If a straight line is perpendicular to two intersecting straight lines at their point of intersection, it is perpendicular to every straight line in their plane through their point of intersection.

Conversely, all straight lines intersecting a given straight line at a given point and perpendicular to it lie in a plane.

If one of two parallel straight lines is perpendicular to a plane, the other is also.

Conversely, if two straight lines are perpendicular to the same plane, they are parallel

If a straight line be at right angles to a plane, any plane through the line is perpendicular to the plane

To draw a perpendicular to a given plane from a given point

One, and only one, straight line can be drawn through a given point and perpendicular to a given plane.

The perpendicular from a given point to a plane is the shortest distance from the point to the plane

If two straight lines are parallel to the same straight line they are parallel to each other.

If two intersecting straight lines are parallel respectively to two other intersecting straight lines the contained angles are equal.

If two planes have a common perpendicular they are parallel, and conversely.

If two intersecting straight lines are respectively parallel to two other intersecting straight lines, the plane of the first two is parallel to the plane of the second two

Straight lines which are cut by three or more parallel planes are cut proportionally.

To draw a perpendicular to two given straight lines not in the same plane.

There is only one common perpendicular to two straight lines not in the same plane

In a tetrahedron the sum of any two angles at a vertex is greater than the third, and the sum of three angles is less than three right angles.

In a polyhedron the sum of the number of faces and the number of corners or vertices is two greater than the number of edges

There are not more than five regular polyhedra.

The four diagonals of a parallelopiped are concurrent and bisect one another

The four straight lines which join vertices of a tetrahedron to the centroids of the opposite faces meet in a point which divides them in the ratio 3:1; and the three lines which join the middle points of opposite edges meet in the same point and are bisected there.

Any plane section of a pyramid taken parallel to the base, is similar to the base, and the area of such a section varies as the square of its distance from the vertex.

The volumes of two pyramids of equal heights and equal base areas are equal.

One sphere and only one can pass through four points not in the same plane

Mensuration of volumes, surface areas, linear measurements in the following prism; pyramid, cylinder, cone, frustum of cone, pyramid, or sphere; zone of a sphere

### C—ELEMENTARY ANALYTICAL GEOMETRY

Axes of co-ordinates. Position of a point in plane of reference

Transformation of co-ordinates,—origin changed, or axes (rectangular) turned through a given angle.

$$\pm z A = x_1 (y_2 - y_3) + \dots + \dots$$

Co-ordinates of point dividing line joining  $P_1 (x_1, y_1)$  and  $P_2 (x_2, y_2)$  in ratio  $m:n$  are  $x = \frac{m x_2 + n x_1}{m + n}$ ,  $y = \frac{m y_2 + n y_1}{m + n}$

$$(P_1 P_2)^2 = (x_1 - x_2)^2 + (y_1 - y_2)^2$$

Equations of straight lines.

$$\left. \begin{aligned} \frac{x - x_1}{x_1 - x_2} &= \frac{y - y_1}{y_1 - y_2} \\ \frac{x}{a} + \frac{y}{b} &= 1. \\ \frac{x - a}{\cos \theta} &= \frac{y - b}{\sin \theta} = r. \\ y &= mx + b. \\ y &= m(x - a). \\ x \cos \alpha + y \sin \alpha &= p. \end{aligned} \right\} \begin{array}{l} \text{Line defined by two points} \\ \text{through which it passes.} \\ \\ \\ \text{Line defined by one point} \\ \text{through which it passes} \\ \text{and by its direction.} \end{array}$$

General equation of 1st degree,  $Ax + By + C = 0$ , represents a straight line.

Any line through  $(x_1, y_1)$  is  $A(x - x_1) + B(y - y_1) = 0$ .

If  $\theta$  be angle between  $Ax + By + C = 0$  and  $A'x + B'y + C' = 0$ , then

$$\tan \theta = \frac{A'B - AB'}{AA' + BB'}$$

Condition of  $\perp$  rity,  $AA' + BB' = 0$ .

Condition of  $\parallel$  ism,  $\frac{A}{A'} = \frac{B}{B'}$ .

Distance from  $(a, b)$  to  $Ax + By + C = 0$ , in direction whose direction cosines are  $(l, m)$  is  $= \frac{Aa + Bb + C}{Al + Bm}$ .

$\perp$  distance from  $(a, b)$  on  $Ax + By + C = 0$ .  

$$\pm \frac{Aa + Bb + C}{\sqrt{A^2 + B^2}}$$

#### THE CIRCLE—

Equations in forms—

$$\begin{aligned} x^2 + y^2 &= r^2 \\ (x - a)^2 + (y - b)^2 &= r^2 \\ x^2 + y^2 - 2rx &= 0 \end{aligned}$$

General equation  $x^2 + y^2 + 2Ax + 2By + C = 0$ ,

$$\text{or } (x + A)^2 + (y + B)^2 = A^2 + B^2 - C,$$

represents a circle with centre  $(-A, -B)$  and radius  $\sqrt{A^2 + B^2 - C}$ .

Tangent at  $(x', y')$  to  $x^2 + y^2 = r^2$ , is  $xx' + yy' = r^2$ .

Normal is  $\frac{x}{x'} = \frac{y}{y'}$ .

Tangent in form  $y = mx \pm r\sqrt{1 + m^2}$ .

Pole being  $(x', y')$ , polar is  $xx' + yy' = r^2$ .

If pole move along a line, polar turns about pole of that line.

Square of tangent from  $(x', y')$  to  $x^2 + y^2 + 2Ax + 2By + C = 0$

$$\text{is } x'^2 + y'^2 + 2Ax' + 2By' + C.$$

Radical axis of  $x^2 + y^2 + 2Ax + 2By + C = 0$ ,

$$x^2 + y^2 + 2A'x + 2B'y + C' = 0$$

Easy exercises on the preceding propositions

One examination paper.

#### PHYSICS

A course defined as follows, the topics to be presented experimentally with mathematical applications simple and direct in character:

MECHANICS OF SOLIDS—Metric and English units of length. Use of vernier calipers, screw-gauge, in measurement of wires, cylinders, spheres, plates, etc.

Unit of time.

Motion. velocity, uniform and variable, average velocity; velocity at a point.

Newton's first law of motion, force, inertia, and mass; metric and English units of mass

Acceleration, measurement of uniform acceleration, acceleration due to gravity, value of  $g$ .

Momentum, Newton's second law, measurement of force; metric and English absolute and gravitational units of force.

Newton's third law, conservation of momentum, centripetal and centrifugal force with illustrations, centrifuge, cream separator, form of earth, etc.

Composition and resolution of forces, parallelogram of forces, triangle of forces; moments, couples; centre of gravity.

Friction: laws of friction, co-efficient of friction

Gravitation: Newton's laws of gravitation; Cavendish's experiment.

Work: measurement of work in metric and English absolute and gravitational units; energy, measurement of energy; kinetic and potential energy, conservation of energy.

Power: measurement of power, horse power, the watt.

Machines: mechanical advantage; lever; wheel and axle, pulley, inclined plane; screw; wedge, simple combinations of the foregoing.

**MECHANICS OF FLUIDS**—Pressure: pressure at a point, Pascal's law; pressure due to gravity, equilibrium of fluids at rest; Archimedes' principle, buoyancy; hydraulic pressure; specific gravity; determination of specific gravity of solids and liquids

Atmospheric pressure: barometers, weight of air; pressure due to molecular motion, lift and force pumps, siphon, the use of compressed air; airbrakes, air tools.

Velocity due to pressure: Torricelli's theorem, pressure in a moving column of fluid varies with the velocity, application to explain the principle of the atomizer, the Bunsen burner, the Bunsen filter pump, forced draught, the curved flight of a ball.

Surface tension: surface force, surface energy, capillarity; practical applications.

**TRANSFORMATIONS OF ENERGY**—Mechanical equivalent of heat, measured mechanically and electrically, measurement of electrical energy, the kilowatt hour.

## CHEMISTRY

Chemistry of Pass Matriculation reviewed and continued.

Reversible reactions and chemical equilibrium: e.g., ice = water; water = steam; bluestone = anhydrous copper sulphate and water; limestone = quick lime and carbon dioxide, ferric chloride and ammonium sulphocyanate = ferric sulphocyanate and ammonium chloride (in solution); a salt in equilibrium with saturated solution, etc. Conditions which effect equilibrium.

Rate of reaction and conditions that effect it (including catalysis), *e.g.*, the action of a dilute solution of potassium permanganate, oxalic acid, in presence of sulphuric acid, the souring of milk, etc.

A study of the following elements and their most characteristic compounds, having regard to Mendeleeff's classification and to their most important economic and industrial applications: hydrogen, sodium, potassium, magnesium, zinc, calcium, aluminium, carbon, lead, nitrogen, phosphorus, arsenic, antimony, oxygen, sulphur, chlorine, bromine, iodine, iron, copper, silver.

Qualitative analysis (practical) may be used for studying the properties of the above elements and for further illustrations of reversible reactions and chemical equilibrium: *e.g.*, a very dilute solution of lead nitrate does not give a precipitate of lead chloride and the same solution may give a precipitate of lead sulphide and from this we may draw conclusions as to the relative solubility of these lead compounds; a dilute solution of lead nitrate with sulphuric acid gives a precipitate of lead sulphate soluble in nitric acid, etc.

It should be kept in mind that the student is not learning analysis but is using the scheme for qualitative analysis to provide illustrations of chemical equilibrium and to illustrate the properties of the compounds, *e.g.*, insolubility, etc.

Organic chemistry, alcohols, acids and esters (fats), methyl alcohol, ethyl alcohol, glycerine, acetic acid, stearic acid, ethyl acetate, tallow and lard. Soap making. Carbohydrates, glucose, cane sugar, starch, cellulose. Hydrolysis of starch. Proteins. Petroleum and its commercial products. Fractional distillation. These organic compounds should be treated from the descriptive point of view and few formulas should be used.

NOTE.—It is suggested that the topics under "Organic Chemistry" be not treated more exhaustively than they are in such text-books as Alexander Smith's *Intermediate Chemistry*, Macpherson and Henderson's *First Course in Chemistry*.

## BIOLOGY

### ZOOLOGY

Practical study of the external form of all types, and the dissection or the study of prepared specimens (or models), as specified below. Observational drawings are essential.

Mode of life and life history of the various types. Reasons for including these types in their respective groups.

АКТИНОПОДА.—Practical study of the external features of the crayfish, including segmentation and appendages, mode of locomotion and respiration. Description, life-history and relation to man of the following insects: May beetle, European corn borer, codling moth, tent caterpillar, mosquito, honey bee, ichneumon fly. Comparison of the external features of the crayfish, grasshopper (or cricket), millipede and spider.

Study of the principles of classification as illustrated by the Arthropoda. Recognition-characters of the following orders of insects Orthoptera, Coleoptera, Odonata, Diptera, Lepidoptera, Hemiptera and Hymenoptera.

VERMEX — Practical study of the external features of the earthworm. Dissection of the earth-worm Study of cross-section of the earth-worm for arrangement of chief organ systems only Mode of locomotion and respiration

MOLLUSCA — Practical study of the external features and mode of locomotion and respiration, of the fresh-water clam, comparison in these respects with the snail.

PROTOZOA — A practical study of the living amoeba or paramoecium

CHORDATA —

PISCES — Practical study of the external features, chief visceral organs circulation and respiration of some common fish

AMPHIBIA — Practical study of the frog under the following headings. (a) external features, (b) the skeleton, (c) the organs of respiration, circulation, digestion and excretion, (d) the central nervous system; (e) the attachment and action of a muscle of the hind leg Study of a cross-section of the frog for arrangement of organ systems Observation of the external features of the development of a frog or toad. Comparison of a frog with a fish as to organs of locomotion, circulation and respiration.

REPTILIA — Practical study of the external features of a snake and a turtle.

AVES. — Practical study of the external features, plumage and skeleton of some common bird. Adaptions to flight with special reference to the form, skeleton, and organs of respiration.

Chief types of bills and feet.

MAMMALIA — Practical study of a (a) chief features of the skeleton, (b) organs of respiration, circulation, digestion and excretion, of a rabbit or a cat.

Comparison of the brain of a rabbit (or cat) with that of a bird, and of a frog

Study of mammalian eye from a specimen or from a model

NOTE. — Except in the case of the frog and of the earthworm where dissection is required, prepared specimens or models may be used. The cross-sections of the frog and of the earthworm should be studied with the low power microscope.

## BOTANY

EXPERIMENTAL PHYSIOLOGY. — Practical studies of absorption (osmosis), plasmolysis, transpiration, photosynthesis, respiration, irritability (e.g., heliotropism), and rate of growth

**MORPHOLOGY AND PHYSIOLOGY.**—Structure and general functions of the following plant organs: leaf, root, stem, flower, seed, fruit. Modification of roots, stems, and leaves for the special functions of storage and support. Light relations of leaves. Stipules, spines and bud-scales. Underground stems, comparison of roots and stems. Pollination and adaptations for cross-pollination. Fertilization, seed dispersal, vegetation reproduction as contrasted with sexual reproduction. Study of typical seeds. Classification of fruits. A study by means of sections of the cellular structure of the leaf and of the relative arrangement of the more important tissues and tissue systems of the stem and root of bean and maize, or of any other typical dicotyledon and monocotyledon.

**CRYPTOGAMS**—The practical study of representatives of the chief subdivisions of the cryptogams: spirogyra, a mushroom, a lichen, a liverwort, a moss, a horsetail, a clubmoss, and a fern. Distribution and economic importance of yeasts and bacteria. Microscopic structure of the yeast plant. Microscopic observation of a bacterial colony.

Recognition, economic importance and control of the following parasitic fungi: grain rust, loose smut of oats or corn smut, apple scab and black knot.

**PHANEROGAMS**—The practical study of representative of the seed plants of the locality, including at least one member of each of the following orders: Coniferae, Gramineae, Liliaceae, Ranunculaceae, Cruciferae, Rosaceae, Leguminosae, Sapindaceae, Umbelliferae, Labiatae, Scrophulariaceae, Compositae.

**ECOLOGY**—*Relation of the structure of plants to their environment.* Plant associations, e. g., mesophytes, hydrophytes, xerophytes. Characteristics of these classes.

**CLASSIFICATION**—The placing of the types studied in their natural divisions, characteristics of these divisions.

Comparison of the ecological with the structural classification.





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FACULTY OF ARTS

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## DEGREE OF BACHELOR OF ARTS

### 1. COURSES LEADING TO THE DEGREE

1. A candidate for the degree of Bachelor of Arts must take one of the courses prescribed by the University

2. The courses for the degree of Bachelor of Arts extend over a period of four academic years

3. Unless specially exempted by the Council, every undergraduate proceeding to the degree must be in attendance on lectures at the University and at one of the Colleges throughout the session in all the subjects of his academic year. The Arts Colleges in the University are: University College, Victoria College, Trinity College, and St Michael's College. Information regarding the relation of the Colleges to the University will be found on page 31.

4. Unless in exceptional cases and by special petition to the Council, a student will not be allowed to register in more than one course.

5. The courses leading to the degree of Bachelor of Arts are:

(a) THE PASS COURSE

(b) The following Honour Courses:

CLASSICS	MATHEMATICS
GREEK AND HEBREW	MATHEMATICS AND PHYSICS
ORIENTAL LANGUAGES	PHYSICS
HEBREW AND ANCIENT HISTORY	BIOLOGY
FRENCH GREEK AND LATIN	PHYSIOLOGY AND BIOCHEMISTRY
MODERN LANGUAGES	BIOLOGICAL AND MEDICAL SCIENCES
ENGLISH AND HISTORY	CHEMISTRY
MODERN HISTORY	CHEMISTRY MINERALOGY AND
POLITICAL SCIENCE	GEOLOGY
PHILOSOPHY	GEOLOGY AND MINERALOGY
PHILOSOPHY (ENGLISH OR HISTORY	SCIENCE (GENERAL)
OPTION)	HOUSEHOLD SCIENCE
PSYCHOLOGY	HOUSEHOLD ECONOMICS

## ADMISSION TO THE PASS COURSE

6. A candidate for admission to the First Year of the Pass Course must present certificates giving him credit for complete Pass Matriculation.

7. A candidate for admission who presents, in addition to complete Pass Matriculation, certificates giving him credit at the Honour Matriculation examination in at least five of the six subjects of the First Year of the Pass Course as set forth in the schedule below, may be admitted to the Second Year of that Course. a candidate who lacks credit for one subject will be required to pass the First Year or equivalent examination in that subject before he will be allowed to register in the Third Year. A candidate who has not complete Pass Matriculation may be admitted to the Second Year of the Pass Course if he presents certificates giving him credit at the Honour Matriculation examination in the six subjects of the First Year. The prescribed fee for such admission to the Second Year is fifteen dollars. The subjects of the First Year are as follows:

1. English
2. Latin
3. Algebra and Geometry
4. One of Greek, German, French, Italian or Spanish
5. History or Trigonometry
6. One of a second language from 4, Physics, Zoology, Botany, Chemistry

## ADMISSION TO AN HONOUR COURSE

8. Every student applying to enter the First Year of an Honour Course must present, in addition to complete Pass Matriculation standing, certificates giving him credit (see Section 13) at the Honour Matriculation or equivalent examination in the five subjects prescribed below for the Honour Course which he wishes to enter.

NOTE—The term "additional subject" includes any one of English, History, Greek, French, German, Italian, Spanish, Trigonometry, Physics, Zoology, Botany, Chemistry

CLASSICS—Greek; Latin, Mathematics (Algebra and Geometry); together with two additional subjects, one of which should be French or German.

FRENCH GREEK AND LATIN—Latin, Mathematics (Algebra and Geometry); two of Greek, English, French; together with an additional subject.

MODERN LANGUAGES—Latin; French, Mathematics (Algebra and Geometry); one of German, Italian, Spanish, together with an additional subject

ENGLISH AND HISTORY—Latin, Mathematics (Algebra and Geometry); two of Greek, English, French, German, together with an additional subject.

- \*MODERN HISTORY { Latin, Mathematics (Algebra and Geometry),  
History, French or German, together with an  
additional subject
- \*POLITICAL SCIENCE {
- \*PHILOSOPHY:—Latin; English; Mathematics (Algebra and Geometry),  
one of History, Greek, French, German, Physics, together with an  
additional subject
- PHILOSOPHY (ENGLISH OR HISTORY OPTION):—Latin; Mathematics  
(Algebra and Geometry); one of History, English, Physics; one of  
Greek, French, German, together with an additional subject.
- PSYCHOLOGY —Latin; Mathematics (Algebra and Geometry, Trigo-  
nometry), French or German; and one of Physics, Zoology, Botany,  
Chemistry.

MATHEMATICS { Latin; Mathematics (Algebra and Geo-  
metry, Trigonometry); Physics, and  
MATHEMATICS AND PHYSICS. { French or German.

PHYSICS  
BIOLOGY  
PHYSIOLOGY AND BIOCHEMISTRY.  
BIOLOGICAL AND MEDICAL SCIENCES { Latin, Mathematics (Algebra  
and Geometry, Trigonometry);  
CHEMISTRY { French or German, and one  
of Physics, Zoology, Botany,  
CHEMISTRY MINERALOGY AND {  
GEOLOGY { Chemistry.  
GEOLOGY AND MINERALOGY {  
SCIENCE (GENERAL) {  
HOUSEHOLD SCIENCE. {

HOUSEHOLD ECONOMICS —Latin; Mathematics (Algebra and Geometry);  
two of English, French or German, Physics, Zoology, Botany,  
Chemistry; together with an additional subject; the candidate is  
recommended to take French or German and a science.

9. A student may apply for admission to the First Year of an Honour Course if he has obtained complete standing in the Pass Course of the First Year, and has met the entrance requirements of the Honour Course as laid down in the above Section, at either the First Year or Honour Matriculation Examination. The student's attention is drawn to the fact that standing in General Science of the First Year will not be accepted as the equivalent of credit at Honour Matriculation in a Science.

## II MATRICULATION

10 The subjects of Pass Matriculation are: Latin, English, History, Mathematics and any two of the following—Greek, French, German, Spanish or Italian, Experimental Science or Agriculture. Two papers are set in each subject.

\*A student may qualify for admission to the Second Year of this course by obtaining complete standing at the First Year examination in the Pass Course with an average of sixty-six per cent. in at least four subjects

11. A candidate for Pass Matriculation will be allowed to write on one or more papers at a time in any order and on obtaining at least fifty per cent. of the marks assigned to any paper will be given credit for having passed in such paper.

12. The subjects of Honour Matriculation are: Greek, Latin, English, French, German, Spanish, Italian, History, Mathematics (Algebra, Geometry, Trigonometry), Physics, Chemistry, Biology (Botany, Zoology).

13. A candidate for Honour Matriculation will be allowed to write on one or more papers at a time in any order, and will be given credit for a subject on obtaining at least fifty per cent. in each paper of that subject, not necessarily at one examination.

14. Certificates of examinations recognized as equivalent in value to the Ontario Matriculation, Pass or Honour, may be accepted as far as they meet the Ontario requirements in subjects and percentages. A candidate applying for admission on such certificates must submit an official statement of the marks upon which these certificates were awarded.

15. The regulations respecting Matriculation together with a schedule of examinations which may be accepted as equivalent are to be found in the Curriculum for Matriculation.

### III. PROCEDURE FOR ADMISSION

#### (a) GENERAL CONDITIONS

16. A candidate for admission should apply to the Registrar of the University for a form of application for admission, he is required to fill out this form and return it to the Registrar **not later than September 10th** together with the following: (a) all Pass and Honour Matriculation or equivalent certificates which he may hold; see Section 14, (b) any other evidence of ability to take the work proposed; (c) certificate of good character.

17. Each application for admission will be considered by the Committee on Admissions, and the candidate will be notified of their decision at as early a date as possible. **A candidate is strongly recommended to await the decision of the Committee before leaving for Toronto.**

#### (b) ENTRANCE AT THE FIRST YEAR

18. Applications for admission to the First Year will be considered from the following classes of students:

(a) The student who has obtained complete credit for the subjects of Pass and Honour Matriculation required for admission to the course which he desires to enter. See Sections 6, 8 and 9. Such a student when admitted becomes an **UNDERGRADUATE** in the Faculty of Arts.

(b) The student who presents other than Ontario certificates accepted by the University as covering the required subjects of Pass and Honour Matriculation. Such a student when admitted will be ON PROBATION and will not be allowed to enter the Second Year until he has passed in full the examination of the First Year; he will then be granted the standing of an undergraduate in the Faculty of Arts. For a list of equivalent certificates see the Matriculation Curriculum. See Section 33.

(c) The student who has not obtained complete credit for the subjects of Honour Matriculation required for admission to an Honour Course. Such a student, if admitted, will be ON PROBATION. See Sections 33, 34 and 35.

NOTE—Applications will not be considered from students, except those mentioned in Section 18(d), who have not obtained credit for at least Pass Matriculation as required for admission to the Pass Course.

(d) The student of mature age who has not obtained complete credit for the required subjects of Pass and Honour Matriculation. Such a student, if admitted, will be ON PROBATION and will not be allowed to enter the Second Year until he has complied with all the conditions which the Council of the Faculty of Arts may impose. See Section 33.

(e) The student who is not proceeding to a degree in Arts, *i.e.*, an OCCASIONAL student. The application of such a student will be considered only when recommended by the staff in the department in which he wishes to enroll. Except by special permission of the Council an occasional student must pass the term and final examinations in a subject in which he may be enrolled before he can be allowed to enroll in that subject for the next higher year.

19. A student applying for admission to the First Year as an undergraduate must have completed the sixteenth year of his age on or before the first of October of the session in which he applies for registration. An occasional student must have completed the nineteenth year of his age on or before the same date.

### (c) ENTRANCE AT THE SECOND YEAR

20. A candidate for admission who presents, in addition to complete Pass Matriculation, certificates giving him credit at the Honour Matriculation examination in at least five of the six subjects of the First Year of the Pass Course as set forth in the schedule below, may be admitted to the Second Year of that Course, a candidate who lacks credit for one subject will be required to pass the First Year or equivalent examination in that subject before he will be allowed to register in the Third Year. A candidate who has not complete Pass Matriculation may be admitted to the Second Year of the Pass Course if he presents certificates giving him credit at the Honour Matriculation examination in the six subjects of the First Year

The prescribed fee for such admission to the Second Year is fifteen dollars. The subjects of the First Year are as follows.

1. English
  2. Latin
  3. Algebra and Geometry
  4. One of Greek, German, French, Italian or Spanish
  5. History or Trigonometry
  6. One of a second language from 4, Physics, Zoology, Botany, Chemistry
21. The only courses open to a student entering on such certificates at the Second Year are the Pass Course, and on conditions to be determined by the Council the Honour Courses in Modern History, Political Science and Philosophy.

22. A student applying for admission to the Second Year as an undergraduate must have completed the seventeenth year of his age on or before the first of October of the session in which he applies for registration.

#### (d) ADMISSION AD EUNDEM STATUM

23. An undergraduate of another University may be admitted *ad eundem statum* on such conditions as the Senate on the recommendation of the Council of the Faculty may prescribe.

24. An applicant for admission *ad eundem statum* must submit with his petition (1) a calendar of his University giving a full statement of the courses of instruction, (2) an official certificate of character and academic standing.

25. Such an applicant may not compete for scholarships at his first examination if admitted to a standing lower than that held in his own University, but, if he obtain standing at this first examination he shall subsequently enjoy all the rights and privileges of an undergraduate of this University.

### IV REGISTRATION AND ENROLMENT

26. Every student in attendance proceeding to a Bachelor's degree in the Faculty of Arts is required to register in the University and to enrol in University College, or Victoria College, or Trinity College, or St Michael's College

27. Application for registration in the University, whether by mail or in person, should be made at as early a date as possible and **not later than September 10th**, and registration in the University together with enrolment in the College must be completed on or before September 29th, 1925. See Sections 16 and 17. **Neglect of early application will result in delay and inconvenience to the student.**



28. Enrolment with the instructors of the University and of the Colleges will begin at 9 a.m. on Saturday, September 26th, and must be completed by the student in person by 5 p.m. on Tuesday, September 29th, 1925.

29. After September 29th no student will be allowed registration for the whole or part of the session 1925-26, without the consent of the Council.

30. Every petition for registration for the Michaelmas Term subsequent to September 29th, 1925, must be accompanied by a sum of money reckoned at one dollar per diem for each day after September 29th. Similarly every petition for registration for the Easter Term subsequent to January 5th, 1926, must be accompanied by a sum of money reckoned at one dollar per diem for each day after January 5th. For sufficient cause the whole or part of such a sum may be refunded.

31. A student who has not enrolled in a subject or subjects on or before September 29th, may, at the discretion of the head of the department concerned, be refused admission to the classes or laboratories, until he shall have satisfied the head of the department that he is competent to proceed with the class. In order to qualify himself for admission such a student may be required to obtain tuition at his own expense.

32. A student of the First Year who has failed to obtain standing at the annual examination sufficient to admit him to the Second Year, will not be allowed to repeat the year unless special permission is granted by the Council, on the recommendation of his College; if such permission is granted the student will be on probation and will not be allowed to enter the Second Year until he has passed in full the examination of the First Year.

## V. STUDENTS ON PROBATION

33. A student who has been admitted under Section 18 (b) or 18 (c) or 18 (d) or a student who, having failed to obtain standing, is permitted to repeat the First Year, will be admitted on probation only, and will be allowed to register for the Easter Term, only on the recommendation of his College after consultation with the staff in each of the subjects in which he is enrolled, and with the consent of the Council.

34. A student on probation admitted to the First Year of an Honour Course must obtain standing at the Pass examination of the First Year in any subject in which his Honour Matriculation credits fall short of the prescribed entrance requirements, before he will be allowed to enter the Second Year.

35. A student admitted on probation to an Honour Course of the First Year will not be allowed by the Council to enroll in any subject beyond the requirements of his course except on the recommendation of his College and of the Department in which he is enrolled on probation.

## VI REGULATIONS RELATING TO STUDENTS IN ATTENDANCE

36 No student will be allowed to continue in attendance, whose presence is deemed by the Council of the Faculty to be prejudicial to the interests of the University.

37 Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work

38 Unless special permission is granted by the Council, a student who, at the close of two sessions in the University, has failed to secure standing in his year, will not be permitted registration in the Faculty of Arts.

39. The Students Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power, subject to the approval of the Caput, to deal with violations of the regulations governing conduct

40 Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities after application by the Executive of the Students Administrative Council, will be severely disciplined.

41. All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Caput.

42 A student who is under suspension, or who has been expelled from a College or from the University, will not be admitted to the University buildings or grounds.

43 The constitution of every University society or association of students in the Faculty of Arts and all amendments to any such constitution must be submitted for approval to the Caput. All programmes of such societies or associations must, before publication, receive the sanction of the Caput through the President. Permission to invite any person not a member of the faculty of the University to preside at or address a meeting of any society or association must be similarly obtained.

44. The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

## VII. FEES

For the schedule of fees see page 44.

## VIII. PHYSICAL TRAINING

45. By order of the Board of Governors each male student proceeding to a degree must take Physical Training in the first and second years of his attendance. He must first undergo a medical examination by the Director

of the University Health Service and must then register for Physical Training at the office of the Athletic Association in Hart House. Students of all years who wish to take part in any form of athletics or physical exercise, must first undergo a medical examination by the Director.

46 Each woman student proceeding to a Bachelor's degree and enrolled in University College shall be required, during the first year of her attendance, to take Physical Training following upon an examination by the Medical Advisor for Women. The women students registered in Victoria, Trinity and St. Michael's Colleges are under the direction of their respective Colleges with respect to Physical Training.

47 The student who has failed to complete satisfactorily the course in Physical Training prescribed for the First Year, will not be permitted to register in the Third Year, and the student who has failed to complete satisfactorily the course in Physical Training prescribed for the Second Year, will not be permitted to register in the Fourth Year.

48 The student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year, must take this work during the Second or Third Year respectively of his course, and will be required to pay a supplemental fee of \$10 in addition to the prescribed Physical Training fee.

## IX EQUIVALENT EXAMINATIONS—FIRST YEAR

49 Certificates of having passed the whole or a part of the following examinations *may* be accepted *pro tanto* for Pass Course subjects but not for the individual papers of a subject at the examination of the First Year or Senior Matriculation. Before exemption is granted on any of the certificates mentioned in this Section, a candidate may be required to satisfy the authorities of the University, and of his College, as to the equivalence of the examinations for which exemption is sought. See section 76 and footnote.

### PROVINCE OF ONTARIO

The Honour Matriculation Examination and the Upper School Examination or examinations of the same standard under other titles.

### PROVINCE OF NOVA SCOTIA

Grade XII Examination.

### PROVINCE OF MANITOBA

Grade XII Examination.

### PROVINCE OF BRITISH COLUMBIA

Senior Matriculation Examination

### PROVINCE OF ALBERTA

Grade XII Examination.

### PROVINCE OF SASKATCHEWAN

First Class Diploma or Senior Matriculation.

## NEWFOUNDLAND

Associate in Arts (Senior) Examination.

## GREAT BRITAIN

The local Examinations for Senior students, conducted by the Universities of Oxford and Cambridge

50. A candidate submitting any of the certificates mentioned in the preceding section must submit an official statement of the marks on which the certificate was obtained.

51. In view of the recent change in the standard for passing in the Pass Course only those certificates which meet these conditions as to subjects and percentages will be accepted. Exemption will not be given in part of a subject of the First Year, e.g., credit in Geometry alone will not be accepted; a student must have passed in both Algebra and Geometry to be given exemption in Mathematics.

52. The Council will consider applications for the recognition of certificates other than those mentioned.

53. A candidate presenting *pro tanto* certificates is eligible for scholarships and for ranking in Honour Courses; but he is not eligible for grading in the Pass Course if he claims exemption in more than two subjects.

## X TEACHERS' COURSE FOR DEGREE

54. In order to assist teachers and others who desire to proceed to the degree of Bachelor of Arts, provision has been made for their instruction by 1, Teachers' Classes during the regular session, 2, (a) supervision during the academic year, and (b) the Summer Session.

55. Persons desiring to enter this course are required to present Upper School, Honour Matriculation, or equivalent certificates covering all or all but one of the subjects of the First Year as outlined in sections 7 and 20. The prescribed fee for entrance at the Second Year is \$15.

56. The Pass Course according to the following scheme will be the basis of instruction

<i>Second Year</i>	English or Mathematics I, French, Science, History, Economics or Psychology.
<i>Third Year.</i>	English, French or Mathematics I, Science, History, Economics or Ethics.
<i>Fourth Year.</i>	English, French or Mathematics I, Science, History, Economics or History of Philosophy

(The Science of these three years is made up of Botany, Zoology, Geology, Physics, Chemistry and Astronomy, which are of equal value and are offered two in each Session only one of which may be taken. The arrangement of this is as follows

- 1925-6. Geology or Physics
- 1926-7. Zoology or Chemistry
- 1927-8. Botany or Astronomy

A student who selects Mathematics, or Political Economy, or the Philosophical Group of subjects, must take the subject or group chosen throughout the three years, *i.e.*, the sequence provided by these subjects cannot be broken.)

57. The subjects of the Second Year are divided into two groups, which are given in alternate years. The subjects for 1925-26 are English or Mathematics, French, Ethics, and Science.

58. The subjects of the Third Year are divided into two groups, which will be given in alternate years. The subjects for 1925-26 are English, Ethics, Economics, and Science.

59. The subjects of the Fourth Year for 1925-26 are English, Ethics, and Science.

60. These courses are open to persons actually engaged in teaching and to such others as have been approved by the Council. In all cases application for admission must be made to the Registrar of the University through the Director of University Extension. Only under exceptional circumstances will a candidate be allowed to attend classes in more than three subjects during one session of the Teachers' Course.

61. A student proceeding to the degree shall on or before *October 1st* of each year submit a statement of the work which he proposes to take (a) in the Teachers' Classes or (b) under supervision preparatory to the Summer Session, and on or before *May 15th* of each year, a similar statement of the work he desires to take during the Summer Session.

62. A student will receive credit for each subject in which he secures fifty per cent.

63. A student will not receive credit for a subject of a higher year until he has passed the examination of the lower year in the same subject. He may, however, be a candidate for examination in the work of two successive years in the same subject.

64. A student who has not been granted complete First Year standing may not enter upon the work of the Third Year, nor a student who has not been granted complete Second Year standing, upon the work of the Fourth Year.

65. Pursuant to Section 124 of the Revised Statutes of Ontario, 1913, in the case of a candidate for the degree of Bachelor of Arts, registered in the Teachers' Course, enrolment in one of the Arts Colleges shall not be necessary.

66 Instruction during the regular session will be given as far as possible to meet the convenience of the members of the classes residing in Toronto and its immediate vicinity. Instruction during the regular session is also provided, as far as possible, in other centres in the Province where a sufficient number of teachers, or others employed during the day, may be enrolled.

67 The Summer Session is held during July and a part of August, and is open (a) to persons engaged in teaching, (b) to such others as have been approved by the Council of the Faculty of Arts, and (c) to regular students who have failed to receive credit in one or at most two subjects of the Pass Course, provided always that instruction in such subjects has been arranged for at that Summer Session.

68. The work of the Second, Third, and Fourth Years of the Teachers' Course may be covered in five years and will involve (a) attendance on Teachers' Classes during four regular sessions or (b) attendance for four Summer Sessions and supervision during four regular sessions.

69. Instead of completing his course under this plan a candidate proceeding to the degree may attend the regular courses of instruction in the Fourth Year, in which case the fourth Summer Session is not compulsory. Students are advised to acquaint themselves with the regulations of the Department of Education respecting High School Assistants' certificates. See page 41.

70 A candidate will not be allowed to present himself for examination in any subject until he has attended one Summer Session and has had supervision of his work during one academic year, or until he has attended Teachers' Classes in that subject during one regular session or until he has completed the necessary minimum of attendance. See Section 68.

71. Supervision of work should precede the Summer Session, but as such supervision may follow class instruction, assistance in the work of either group of the Second Year or of the Third Year will be provided.

## XI. CONDITIONS FOR ACADEMIC STANDING

### CREDIT IN PASS SUBJECTS

72 To receive credit in a Pass Subject, a candidate must obtain at least fifty per cent. of the examination marks, as well as fifty per cent. of the aggregate of the term and examination marks in that subject, but where he has at one examination obtained an average of sixty per cent. of all the marks assigned to the Pass subjects of his annual examination, forty per cent. will (subject to the provisions of Section 95) be accepted in one or at most two subjects in lieu of the fifty per cent. required above.

73 At supplemental examinations fifty per cent. in each subject will be required.

74 In the First and Second Years a candidate who has failed to receive credit in one of a group of optional subjects may with the approval of the Council present himself at the supplemental examinations in any other of the alternative subjects, except in the case of those subjects in which term work is an integral part of the subject. In such a substitution, however, the candidate must, unless exempted by the Council, comply with all the conditions respecting term work, i.e., there can be no transfer of term marks from the subject originally chosen to that substituted.

75 A successful candidate in a subject is graded as "A" or "B" or "C" or "Below the Line (B.L.)" according to the percentage obtained in the subject. For grade "A", a candidate must obtain at least seventy-five per cent., for grade "B", at least sixty-six per cent., for grade "C", at least fifty per cent. of the marks assigned to a subject, provided he has obtained at least fifty per cent. of the examination marks in the subject. For grade "B.L." he must obtain at least forty per cent. of the marks assigned to a subject

#### STANDING IN THE PASS COURSE

76. A candidate will be granted standing at an annual examination, provided he obtains credit under Section 72, in at least four of the subjects proper to his year. At the examination of the First Year, however, a candidate who has \*exemption in one or two subjects must obtain credit under Section 72 in all or all but one of the remaining subjects

77. A candidate who is required to take six subjects in the First Year, and who has failed in two of these subjects, must obtain credit for at least one of them before he can register in the Second Year.

78 A candidate must obtain complete standing in the First Year before he can register in the Third Year, and he must obtain complete standing in the Second Year before he can register in the Fourth Year.

79. A candidate who obtains an average of at least seventy-five per cent. of all the marks assigned to the subjects proper to his year will be awarded Grade A standing in his course; a candidate who obtains an average of at least sixty-six per cent. will be awarded Grade B standing; and a candidate who obtains an average of at least sixty per cent. will be awarded Grade C standing.

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\*Except under special circumstances and on the recommendation of his College, a student of the First Year may not claim exemption in more than two subjects, and so must attend lectures and write examinations in at least four subjects.

†In the First Year, students who write on four subjects only or less, will not be graded in the Course.

## CREDIT IN HONOUR SUBJECTS

80 A candidate who obtains at least seventy-five per cent. of the marks assigned to an Honour subject will be awarded First Class Honours, a candidate who obtains at least sixty-six per cent. will be awarded Second Class Honours; a candidate who obtains at least sixty per cent. will be awarded Third Class Honours, and a candidate who obtains at least fifty per cent. will be ranked as "Below the Line."

81. No candidate will be given credit in an Honour subject where term work is taken into account, unless he obtain at least fifty per cent. of the marks at the May examination, as well as fifty per cent. of the aggregate of the term work and examination marks in that subject.

82. A candidate who fails to obtain fifty per cent. in an Honour subject, may be granted pass standing therein.

## STANDING IN HONOUR COURSES

83 In order to obtain standing in an Honour Course, a candidate must have obtained (a) at least fifty per cent. in each Honour subject of the course as well as (b) credit as defined in Section 72 in all, or all but one of the Pass subjects attached thereto

84 A candidate in the Fourth Year who fails to obtain standing in his Honour Course may on recommendation of the examiners be awarded a Pass degree. Such a candidate may accept the award or may repeat the year and again compete for Honours

85 A candidate, who has fulfilled the conditions of Section 83, will be awarded First Class Honours in order of merit provided he has obtained an average of seventy-five per cent. of all the marks assigned to the Honour subjects of his course, such a candidate will be awarded Second Class Honours in order of merit provided he has obtained an average of at least sixty-six per cent.; such a candidate will be awarded Third Class Honours provided he has obtained an average of at least sixty per cent., and such a candidate will be ranked as "Below the Line" provided he has obtained less than sixty per cent

86 A candidate in an Honour Course, who has failed in two Pass subjects, will have his standing deferred both in the Honour Course and in the individual subjects thereof until he has passed in both Pass subjects, he will be debarred from registration and enrolment in the higher year until he has passed in at least one of these and has fulfilled the conditions of Section 90.

87. A candidate in an Honour Course will not be granted standing in his year if he fail in more than two Pass subjects.



88 A candidate of the First or Second Year who fails to secure standing in an Honour Course may be transferred to the Pass Course on such conditions as the Council may impose. Such a candidate may accept the award or may repeat the year and again compete for Honours.

89 A candidate in an Honour Course of the Third Year who fails to secure standing must repeat the Year, unless he be transferred to the Pass Course by the Council on the special report of the Board of Examiners.

90 A candidate must obtain complete standing in the First Year before he can register in the Third Year, and he must obtain complete standing in the Second Year before he can register in the Fourth Year.

### TERM WORK

91. In the Pass Course, reports on the term work of every student proceeding to a degree will be made in all the subjects of each year, except in purely lecture courses where the Council, on the recommendation of the teaching staff, may have approved the omission of such reports.

92 The marks for term work in a subject of the Pass Course will be determined in the manner considered most suitable by the teaching staff in that subject.

93 In all subjects of the Pass Course, the ratio of term marks to examination marks will be as fifty to one hundred, except in English where the ratio is as one hundred to one hundred.

94. When a candidate fails to secure credit in a Pass subject, other than English or a Science of the Second, Third and Fourth Years, because of a deficiency in term marks he must either (1) earn a new term mark under conditions to be determined by the staff in the subject, and repeat the examination or (2) make up the deficiency of term marks by obtaining a corresponding increase in his examination marks.

95. A candidate whose term work in English is deficient, or who obtains less than fifty per cent. of the marks assigned to the term work in any one of the Pass Sciences of the Second, Third and Fourth Years must obtain a satisfactory term mark under conditions to be determined by the staff concerned, and subsequently must pass a supplemental examination in the subject.

96. In the Honour Courses, reports in term work will be made wherever such work is specified as a part of the course.

97. In an Honour Course, the ratio of term marks to examination marks in a subject will be determined by the staff in that subject.

98. A term examination shall not, unless it be so specified in the calendar, take the place of the Annual Examination in May on any portion of the prescribed work of an Honour Course.

99 A student who has failed to obtain standing at the May examination and who is repeating his year, must repeat the term work in each subject of his course unless, under exceptional circumstances, he be exempted from part or all of such term work by the Council on the recommendation of his College and of the Department or Departments concerned.

#### CONDITIONS OF ENTRANCE TO THE VARIOUS YEARS

100 In order to proceed in an Honour Course in the Second Year a candidate at the examination of the First Year (1) must have fulfilled the conditions of Section 83 (2) must, if his standing is deferred, have fulfilled the conditions of Section 85, and (3) in the case of a student on probation must have fulfilled the conditions of Section 34

101. In order to proceed in an Honour Course in the Third Year, a candidate at the examination of the Second Year (1) must have fulfilled the conditions of Section 83, (2) must have complete First Year standing, and (3) must, if his standing is deferred, have fulfilled the conditions of Section 86.

102. In order to proceed in an Honour Course in the Fourth Year, a candidate at the examination of the Third Year, (1) must have fulfilled the conditions of Section 83, (2) must have complete Second Year standing, and (3) must, if his standing is deferred, have fulfilled the conditions of Section 86.

#### REPEATING THE YEAR

103. A student who has been granted standing in any year of the Pass Course may on conditions to be determined by the Council repeat that year in an Honour Course, and on obtaining standing, may proceed therein. See Section 9.

104 A candidate in any course who for any cause is debarred from the higher year, may repeat the whole examination in the following May, but is not eligible for scholarships, medals, or prizes.

105 The student who has failed to obtain standing at the May examination and who desires to repeat his year, is referred to the following sections—32, 33, 38 and 99

#### XII EXAMINATIONS

106. No candidate will be admitted to examination unless the Head of the College in which he is enrolled certifies that he has complied with all the requirements of that College affecting his admission to such examination.

107 A candidate will not be admitted to an examination unless he has paid all the fees due from him A candidate who fails to pay his examination fees on or before March 1st—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

108. A candidate who fails to send his "application for examination" by the day appointed for receiving such applications must pay an additional fee of one dollar.

109. No candidate in a course involving practical work in a laboratory will be admitted to examination if the Professor under whom his work is carried on reports that he has neglected his laboratory work or signally failed in the practical examinations.

110. Representations on the part of candidates with regard to the May examination and applications for consideration on account of sickness, domestic affliction, or other causes, must be filed with the Registrar before May 24th. In the case of the June or September examination such applications must be filed with the Registrar before the close of the examination.

#### THE MAY EXAMINATION

111. The May examination is held at the University and is open to candidates of all the Years in the Pass Course and in all the Honour Courses.

112. Arrangements will be made, whenever possible, to allow a graduate, who is engaged in teaching in Ontario and who desires to receive credit in subjects not taken during his undergraduate course, to take such examinations in his own locality.

113. If the time-table permits, a candidate may present himself for examination in subjects in which he has previously failed to receive credit.

114. In the case of Fourth Year candidates, where there is a conflict in the time-table, a special supplemental examination may be arranged.

115. A candidate for examination is required to send an application, according to a printed form, to the Registrar not later than March 1st.

#### THE JUNE EXAMINATION

116. The June Examination, which is held at the University and at such centres as may from time to time be authorized by the Council of the Faculty, is exclusively for candidates for Senior Matriculation in the Pass Course.

117. A candidate for this examination is required to send an application, according to a printed form, to the Registrar not later than May 1st.

118. The presiding examiner or examiners at a local Senior Matriculation examination will be appointed by the Council of the Faculty, and should, if necessary, be competent to conduct an examination in French or German Dictation.

119. The expenses in connection with such local Senior Matriculation examination must be met by the candidates at the centre or by the authorities of the school or college on whose application the examination is held.

#### THE SEPTEMBER SUPPLEMENTAL EXAMINATION

120. The September Supplemental examination is held at the University, and is open (1) to candidates who obtained standing at the May or June examination but who failed in one or, in some cases, two Pass subjects, and (2) to candidates in any year of the Pass Course who were prevented by sickness, domestic affliction or other causes beyond their control, from attending the May Examination. The latter candidates must prove to the satisfaction of the Council the sufficiency of the alleged cause of absence not later than June 15th.

121. If feasible this supplemental examination will be held at Winnipeg, Regina, Saskatoon, Edmonton, Calgary and Vancouver. The candidate for whom such an examination is held must meet the expenses incurred and should make early application for the privilege.

122. A candidate for this examination is required to send an application, according to a printed form, to the Registrar not later than August 1st.

## GENERAL INFORMATION

## THE UNIVERSITY AND THE COLLEGES

In the Faculty of Arts of the University there are four Colleges: University College, Victoria College, Trinity College and St. Michael's College; and every student registered in the Faculty must enroll in one of these Colleges.

Each College gives instruction to its students in the following subjects: Greek, Latin, Greek and Roman History, Oriental Languages, Ancient Oriental History, English, German, French, Ethics and \*Religious Knowledge. Instruction in the remaining subjects of the curriculum—Italian, Spanish, Modern History, Political Economy, Law, Philosophy, Psychology, Mathematics, the Sciences, World History and Military Studies—is given by the University.

The annual examinations are conducted by the University, which also grants academic standing upon the results of these examinations and confers the degree upon the successful completion of a prescribed course of study.

## THE LIBRARY

The University Library is contained in a building of its own, situated on the east side of the campus that lies to the south of the Main Building. All students who have paid a library fee to the Bursar of the University are entitled to the privileges of the Library. Besides Reading Rooms the building contains Departmental Studies, which may be used as study-rooms by honour students in the various branches in which the Professors hold seminary courses, and private studies, intended for members of the Faculty or advanced students engaged in research work. The Library is opened at 8.45 every morning and remains open until 10 at night during the academic term. Books in ordinary use may not be taken out of the building during the daytime, but are lent for the night toward 5 p.m., to be returned the following morning before 10 o'clock. Books not in general demand may, on application, be borrowed for a longer period. Failure to return a borrowed book at the proper time and other breaches of the regulations are punishable by fine or suspension from the privileges of the Library.

## ROYAL ONTARIO MUSEUM

## ARCHAEOLOGY, GEOLOGY, MINERALOGY, PALAEONTOLOGY, ZOOLOGY

Students of the University in all departments are recommended to avail themselves of the privileges of the Museum, which, although under separate control, is intimately connected with the work of the University.

\*In University College, courses in Biblical History and Literature, given by the Staff in Oriental Languages, are prescribed in place of Religious Knowledge.

The Museum is open on all week days from 10 a. m. to 5 p. m., Sundays 2 to 5 p. m. The Admission is free to the public on Tuesday, Thursday, Saturday and Sunday. On other days an admission fee of fifteen cents is charged.

By a resolution of the Board of Trustees all regular students of the University may be admitted free on all days of the week by presenting their card of registration

## HART HOUSE

Hart House, the gift of the Massey Foundation, is so called in memory of Mr. Hart Massey. In its widest interpretation it seeks to provide for all the activities in the undergraduate's life apart from the actual work in the lecture room. It affords all the facilities of a first-rate club. In the beauty of its architecture and the various functions which it performs it is unique on this continent.

Hart House contains completely equipped club rooms, including common rooms, reading room, music room, lecture room, sketch room, photographic dark rooms, the Great Hall, which is the students' dining hall, a small Chapel, rooms reserved for religious organizations in the University, gymnasia, squash courts, swimming pool, running track, rifle range, billiard room, library and Hart House Theatre.

Hart House is open from 8.00 a.m. to 11.15 p.m. daily and meals are served in the Great Hall throughout the academic year. Members are entitled to full privileges of all rooms in the building between these hours and the use of the gymnasia, pool, showers and locker rooms until 6.30 p.m. each day, except Sunday, subject to the regulations of the Athletic Association.

The Library contains a good selection of books of general interest. These books must not be taken from the room.

Sunday Evening Concerts are given by the leading musicians of the city at 9 p.m. in the Great Hall on certain Sundays during the session and music recitals take place at 5 p.m. every Friday in the Music Room.

The Sketch Room is equipped with facilities for drawing and painting. Weekly drawing and painting classes are given by a qualified instructor and frequent exhibitions of pictures and lectures on Art are arranged.

A group of rooms is set apart for the use of the Faculty Union. A dining room and a common room are also reserved for Graduate Members. Six bed-rooms are available for the use of guests, at a reasonable charge.

The Warden is entrusted with the general supervision of the whole house in co-operation with the following committees. House, Hall, Library, Music, Billiard, Sketch, Camera and Squash. These committees consist of two senior members, a graduate member, the Warden and a full representation of undergraduates. The undergraduates are elected annually by their fellow students. The Board of Stewards is the Senior Committee and has final control of the House, being directly responsible to the Board of

Governors. It consists of the Warden (ex-officio chairman) and representatives of the President of the University, the Board of Governors, the Faculty Union, the Athletic Association, the Graduate Members, the Student Christian Association, the Students' Administrative Council and the undergraduate secretaries of all Standing Committees.

Hart House Theatre is an Art Theatre in the University, existing to promote the interests of dramatic art in the widest sense. The theatre is operated by a Board of Syndics, who are responsible to the Governors of the University for its administration. It has always been the policy of the Syndics to encourage the use of the theatre by those recognized dramatic societies within the University which are endeavouring to do serious work. When it is possible to do so, without interfering with the legitimate activities of the Theatre, the Syndics will be glad to allow its use by other student organizations.

All male undergraduates proceeding to a degree in the University are members of Hart House. The annual fee of \$8.00 covers all fees in connection with Hart House and membership in the Athletic Association for the academic year (September to May). Membership Cards may be obtained at the Warden's Office on presentation of the Bursar's receipt for fees paid.

Hart House has no endowment whatsoever and is entirely dependent for its upkeep on the fees received from graduates and undergraduates and from various sources of revenue in the House itself.

Other male students in the University, or students in the affiliated or federated institutions receiving instruction in the University, may become members of Hart House on payment of the required fee at the Warden's office. Should the students of any of these institutions elect to join Hart House in a body the \$8.00 fee still obtains but for individual membership the fee is \$10.00.

Graduates are entitled to the full privileges of Hart House on payment of an annual fee of \$10.00. Out-of-town graduates may become members on payment of an annual fee of \$2.50.

## UNIVERSITY COLLEGE WOMEN'S UNION

79 ST. GEORGE STREET

Acting Dean of Women and Head of the Union Mrs. M. M. Kirkwood, Ph.D.

Secretary, Miss A. Macdonald, B.A.

The Union contains common rooms, library and reading room, dining hall, rest room, and guest rooms for the use of members.

MEMBERSHIP—All women undergraduates of University College are members of the Union. Graduates may also belong. (For membership fee see Fees.)

MEALS are by flat rate or ticket.

Flat rate per week. . . . .	.. . . .	.. . . .	.. . . .	.. . . .	\$5.00
Breakfast (7 tickets) ..	..	..	..	.. . . .	2.00
Luncheon (5 tickets) . . . . .	..	..	..	.....	1 25
Dinner (7 tickets). . . . .	..	..	..	.. . . .	3.00

REGISTRATION—All women undergraduates in University College are required to register with the Acting Dean, at the beginning of term.

BOARDING HOUSES—Women undergraduates who are away from home and not living in Queen's Hall or a College residence must have their boarding houses approved by the Dean. Students who need boarding houses are asked to communicate with her by letter after August 1st.

## VICTORIA COLLEGE WOMEN'S STUDENT UNION

The Women's Student Union, situated in the South end of Annesley Hall, with entrance by the south-west gate, comprises a common room, library, tea room, kitchen and cloak rooms. These serve as common rooms for the women students of the College, and are the centre of their social activities. The rooms are available for committee meetings, discussion groups, Bible study classes, larger meetings, and class receptions. The Women's Undergraduate Association, under the supervision of the Dean's council, make the rules and regulations for the use of the rooms.

Cafeteria luncheon is served in the tea room.

For women students the fee is \$5 00, to be paid to the fees clerk of the College. The money so derived will be applied to the maintenance of the common rooms.

For further information please apply to the Dean of Women Students, Victoria College.

## RESIDENCES

### UNIVERSITY OF TORONTO

#### RESIDENCE FOR MEN

By the generosity of Mr. and Mrs. E. C. Whitney and other friends, the University can now offer to some hundred and fifty men the peculiar advantages of residential life and excellent accommodation within its own grounds. The Residence, opened in November, 1908, consists of three Houses situated on the north side of Hoskin Avenue, opening upon a quadrangle, the fourth side of which is formed by Devonshire Place. They stand about two hundred yards to the north of University College and close to Hart House. The buildings are known as the South, East and North Houses.



Each House contains twenty-four single rooms, one single suite, one double room and eleven suites, a suite comprising a study and two bedrooms. A large room in each building, with an open hearth, has been set aside as a common room. A lavatory with hot and cold shower baths is provided for every eight men. The buildings are heated by steam and lighted by electricity.

The University supplies the table, chairs, book-case, chiffonier, bed, mattress, pillows, linen and window shades for each room; it is prepared to furnish a desk-lamp for a nominal rental.

The rates are \$4.00 per week for a single room or half of a suite, and \$5.00 per week for a single suite. The rental for the Michaelmas Term is payable in advance in one instalment, that for the Easter Term is payable in two instalments—\$50.00 at the opening of the term and the balance on April 1st. Except under very special circumstances occupants vacating during a term will forfeit the rent paid. These charges cover heat, light, house-service, house-laundry, and the use of the telephone. There is no separate dining hall connected with the Residence, but board may be obtained at the adjacent University Dining Hall in Hart House.

Applications for rooms must be made in writing to the Secretary of the Residence Committee (address the Registrar's Office) and must be accompanied by a deposit of \$5.00. This deposit will be returned if the application is not granted, but will be forfeited if a room is assigned to the applicant and not taken by him, unless notice of his refusal of the room is received by the Secretary in writing before September 15th. It will be returned in full at the end of the College year if the room key is given back and the room and furniture left in a satisfactory condition. The following principles govern the allotment of rooms: (i) No student, who as a result of the annual Spring examinations is not assured of being able to proceed to a subsequent year, will be admitted into the Residence. Exception to this rule will be made in the case of a student in the Faculty of Medicine who has obtained standing at the May examination, but is debarred by the rules of that Faculty from proceeding to the subsequent year until he has passed his Supplemental examinations. Such a student will be assigned a room provisionally, but cannot occupy it unless he passes his Supplemental examinations in September. (ii) The rooms in each house will be distributed among the various Faculties and Years. (iii) A limited number of rooms will be reserved for members of the incoming First Year until September 12th. (iv) Applications will be considered in order of priority.

The University lays down three general rules, designed to prevent hazing, the use of intoxicants and gambling. The students in each House shall elect a House Committee, which is entrusted by the University with the making and enforcing of any other needed rules and with the maintenance of order. A member of the Faculty resides in each House to act as friend and adviser to the men in residence.

## QUEEN'S HALL, RESIDENCE FOR WOMEN,

## NOS. 4, 7, 9 QUEEN'S PARK

Superintendent, Miss Louise I. Livingstone, B.A.

Accommodation is provided for 98 students. The rate for room and board is \$9.50 per week for the 32 weeks of the academic year, and these dues must be paid to the Bursar in advance by the month or term.

Applications for rooms must be made in writing and a deposit fee of \$5.00 must accompany each application. The fee will be returned if the application is not granted or if it is withdrawn before September 15th. It will be returned in full at the end of the college course if the room is left in good condition and there are no breakages.

Applications from First Year Students will be considered first, the other years in order of priority. Those undergraduates who have supplemental examinations to write must be successful before they can be enrolled.

The students elect a House Committee to assist the superintendent in the maintenance of order and for the general welfare of the household

## UNIVERSITY COLLEGE

## RESIDENCES FOR WOMEN, 94 AND 85 ST. GEORGE STREET

These two residences, accommodating respectively forty and twenty-five students, are connected with the University College Women's Union. The rate for rooms is \$4.00 to \$5.00 a week for the 32 weeks of the academic year, payable to the Bursar in advance by the month or term. Meals are taken at the Union, the rate being \$5.00 a week. Applications for residence are to be made to Mrs. M. M. Kirkwood, 79 St. George Street, Toronto, and are to be accompanied by a deposit of \$5.00, which will be refunded if the application is withdrawn before September 15th. The deposit will be returned in full at the end of the College course if the room is left in good condition.

## VICTORIA COLLEGE

## THE RESIDENCE FOR MEN

There is accommodation in the four houses of the Residence for 132 undergraduates of Victoria College. Each room is completely furnished as a combined study and bed room. About 15 rooms have fire places. There is a Common Room in each House. The weekly charge to men in Residence for room and meals is from \$8.00 to \$9.00. The Dining Hall, known as Burwash Hall, is mainly for the use of students of Victoria College, but there is accommodation for a limited number of men from other Colleges and Faculties. Students, other than those in Residence, may buy individual meal tickets, strip of tickets or board at a weekly rate of \$5.25. Applications for rooms and all inquiries should be addressed to the Accountant, Victoria College.

## RESIDENCES FOR WOMEN

The women students of Victoria College are housed in four buildings—Annesley Hall, South Hall, the Annex, Oaklawn, accommodating sixty-six, twenty-five, twenty-seven, and twenty-six students respectively. The houses are all near the College.

Applications for rooms must be accompanied by a deposit fee of \$10 00, which will be refunded if the application is withdrawn before September 1st. Fees for the year range from \$265 to \$400, according to the location of the room, and are payable half on October 1st and half on February 1st.

Additional fees are—medical examination \$2 00; nurse's fee \$10.00; use of laundry \$2.00. These charges are subject to change.

For further information kindly write to the Dean of Women Students, Victoria College, Queen's Park, Toronto.

## TRINITY COLLEGE

Trinity College provides residences for both men and women students. The men reside in Trinity Residence, in which there is accommodation for one hundred students or upwards. The women reside in St. Hilda's Residence, in which accommodation for sixty or more is provided

## RESIDENCE FOR MEN

Excellent accommodation for men is to be found in the residence on St George St. (at Harbord St.) set apart for their use. Several members of the staff are resident in the building. The students' living rooms are so arranged that two students may room together, or a student may have a room to himself, as may be preferred. Details as to fees for room and board, which are maintained at the lowest rate consistent with first class service, will be sent on request.

Applications for rooms in College are to be made on a printed form provided for this purpose, and are received at any time after January 1st for the succeeding Michaelmas Term, being subject to withdrawal on written notice up to September 1st. Most of the rooms, being furnished partly by the College and partly by the occupants, may be fitted up to suit the taste of the individual student. Further information, with blank forms of application, will be supplied on request being made to "The Provost, Trinity College, Toronto".

## RESIDENCE FOR WOMEN

Excellent accommodation for the women students of Trinity is provided on St. George St., close to the main college building.

For information as to fees and academic qualifications for admission, also for blank forms of application, address "The Provost, Trinity College, Toronto". Applications for residence are referred by him to the Principal, St. Hilda's, but no applications for residence can be accepted until the academic qualifications have been submitted to the Provost.

## ST. MICHAEL'S COLLEGE

For Catholic students St. Michael's now offers all the advantages peculiar to a Catholic College.

## RESIDENCE FOR MEN

There is accommodation for the men at St. Michael's College. Parents are most careful of the dangers and temptations to which students, away from home for the first time, are subjected. This is a point that St. Michael's chiefly considers, and she is in a position almost to guarantee that the student will be as safe in every way as if he were in his own home, in addition to receiving all the advantages of the University.

The residents are subjected to a reasonable rule with a view to careful supervision, and a solid moral and religious training. Constant and intimate intercourse between staff and student is a feature.

The health and development of body and mind is promoted by regulated hours of study and recreation. Opportunity is given for all kinds of athletic exercise. For terms and application, address "The Superior".

## RESIDENCE FOR WOMEN

For women students, St. Joseph's Convent, St. Alban's Street, and Loretto Abbey College, 385 Brunswick Avenue, are providing residences to meet in every way the wishes of all. Address "The Superior".

## ARGYLL HOUSE

## 100 QUEEN'S PARK

Accommodation for thirty women students is afforded by Argyll House, the rate for rooms is \$4.00 per week for the 32 weeks of the academic year, payable to the Bursar in advance by the month or term. Applications should be made to the Secretary of the Argyll House Committee, 79 St. George Street, Toronto.

## STUDENTS ADMINISTRATIVE COUNCIL

The Students Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power subject to the approval of the Caput, to deal with violations of the regulations governing conduct.

Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities after application by the Executive of the Students Administrative Council, will be severely disciplined.

## WOMEN STUDENTS ADMINISTRATIVE COUNCIL

The Women Students Administrative Council is the representative organ of the women students of the University of Toronto and aims to coordinate all intercollegiate activities. It consists of representatives from all colleges and faculties. A fee of \$3 is paid for the council by each woman student proceeding to the Bachelor's degree. The council assumes joint financial responsibility with the men's council for the publication of *Varsity* and *Torontonensis*.

## THE ATHLETIC ASSOCIATION

University athletics for men are under the entire control of the University of Toronto Athletic Association, of which the executive body is the Athletic Directorate. This consists of:

- The President of the University,
- Two members of the faculty, appointed by the President,
- Two graduates, appointed by the Athletic Advisory Board,
- The Medical Director and the Financial Secretary (*ex-officio*),
- Five undergraduates, elected annually,
- An undergraduate representative, appointed by the Executive of the Students' Administrative Council.

The Directorate alone has the power to sanction the use of the name "The University of Toronto" in connection with men's athletics, and no men's athletic event can be held in the University without its approval. It has control of the athletic field, the gymnasium, the swimming pool, and other conveniences in connection with athletics in Hart House, and is empowered by the Board of Governors to make the necessary arrangements to effect the carrying out of the University regulations requiring Physical Training for men.

## WOMEN'S ATHLETIC ASSOCIATION

University athletics for women are under the entire control of the University of Toronto Women's Athletic Association, of which the executive body is the Women's Athletic Directorate. This consists of:

- The President of the University,
- Two women members of the faculty, appointed by the President,
- Two women graduates, elected by the Women's Athletic Advisory Board,
- The Medical Advisor for Women, the Physical Directress, and the Financial Secretary (*ex-officio*),
- Five undergraduates, elected annually.

The Directorate alone has the power to sanction the use of the name "The University of Toronto" in connection with women's athletics, and

no woman student may participate in any athletic event during the academic year without its permission. The Medical Advisor for Women and the Physical Directress are authorized to arrange for such Physical Training for women as is required by the University.

### CANADIAN OFFICERS TRAINING CORPS

The Toronto Contingent of the Canadian Officers Training Corps was organized in 1914. Its primary object is to provide students at Universities with a standardized measure of military training with a view to their qualifying for commissions in the country's auxiliary forces. C.O.T.C. certificates of qualification exempt their holders from examination for commissioned rank on joining a Militia unit in Canada, or, if resident in the British Islands, render them eligible for commissions in the Army Reserve of Officers, the Militia, or the Territorial Army. Holders also obtain certain concessions and privileges on offering themselves as candidates for entry to Woolwich, Sandhurst, and the Air Force College or for first appointments in the Navy, the Naval Medical Service, the Royal Marines and the Army Medical Corps.

The facilities which are offered by the contingent for obtaining a qualification while at the University are intended to enable young gentlemen to give personal service to their country with the least possible interference with their civil careers, to ensure that units have their establishments complete in the junior commissioned ranks, and to build up an adequate reserve of scientifically trained officers who have completed a period of consecutive and systematic military training, on academic lines, of a nature calculated to produce good officers.

The contingent provides the practical work for students taking the Military Studies option for the Arts degree, as also physical exercise for students who may choose this as the form in which they will take their compulsory Physical Training. In addition to service in the corps for a University credit, students of any year or faculty are trained in it to qualify for officers' certificates in the Infantry, Engineers and Army Medical Corps, writing on the examinations set by the War Office for members of O.T.C. contingents throughout the Empire.

There are at present three companies—in Arts, Medicine and Applied Science respectively—and the training of each is so arranged that on leaving the University students are qualified for commissions in that branch of the Militia to which their University course particularly applied.

The C.O.T.C. is a unit of the non-permanent Active Militia but forms no part of the organization for war and cannot be called out for active service as such. It is a training centre for the educated youth of the country from whom, as from all its sons, the Empire requires hard service, but the hardest from those to whom most has been given.

The present Headquarters are at 184 College Street, and include armouries, members' reading room, library and lecture rooms.

The Contingent's Staff is,—

Officer Commanding, COLONEL W. R. LANG, late Gen Staff, C.E.F.

Second in Command, MAJOR T. R. LOUDON, late Can. Eng., B.E.F.

Adjutant, CAPT W. J. T. WRIGHT, M.B.E.

Quartermaster, CAPT. W. G. C. KENNEY, late R.A.V.C., B.E.F.

Paymaster, CAPT. T. A. REED

Contingent Sergeant-Major, S.-M. W. HUNT, late Royal Welch Fusiliers

For particulars of courses in Military Studies see page 160.

## ACADEMIC STANDING FOR HIGH SCHOOL ASSISTANT'S CERTIFICATE

The Department of Education of Ontario has approved the following regulations with respect to the academic standing necessary for admission to the Course for a High School Assistant's Certificate in the Ontario College of Education.

### I. ORDINARY HIGH SCHOOL CERTIFICATE

A candidate for admission shall submit with his application his certificate of graduation as Bachelor or Master of Arts, Bachelor or Master of Science, Bachelor of Commerce, Bachelor of Agriculture, or Bachelor of Applied Science, from a British university, after a regular university course approved by the Minister of Education as to entrance requirements and as to content of the undergraduate courses. Each applicant must have Upper School or Honour Matriculation standing in English and History and Mathematics or the equivalent of such standing.

### II. HIGH SCHOOL SPECIALIST'S CERTIFICATE

Note—It is anticipated that by July 1st, 1925, new regulations respecting High School Specialists' and Inspectors' Certificates will be substituted for the following regulations :

Subject to the conditions specified below, the academic standing for admission to the courses leading to High School Specialists' certificates in Classics, English and French, English and German or Spanish, French and German or Spanish, English and History, Mathematics and Physics, Science, and Household Science is an Honour degree in Arts from any one of,—the University of Toronto, Queen's University, McMaster University, and the Western University.

1. The courses in the departments specified above shall be the Honour courses as defined in the calendars of the respective Universities for the year 1920-21. After due notice from any one of the four Universities, the Minister may accept modifications of its courses for Specialist standing.

2. Honour degrees in Arts from other British Universities on courses which are deemed to be the equivalent of those prescribed in the calendars of the four Ontario Universities may be accepted for Specialist.

3. The courses shall extend over at least five years from Pass Matriculation or, as may be determined under the regulations of the University concerned, over four years from Honour Matriculation.

4. Candidates shall attend for at least two full academic years. Under the direction of the University they may substitute for one of those years, at least two Summer Sessions.

5. The standard for each year shall be that prescribed by the University for candidates taking Honour courses, with the additional provision that in the final Honour work of the department in which specialist standing is sought, the standard shall be at least Second Class Honours (sixty-six per cent.).

6. The Minister shall have authority to deal with any case not covered under the above. Each University shall submit to the Minister a recommendation on any case whose merits justify special consideration.

### THE PEARSON KIRKMAN MARFLEET LECTURESHIP

In November, 1910, Mrs. Lydia A. Marfleet, of Prophetstown, Illinois, gave the sum of \$5,000 to found a lectureship in the University of Toronto, to be called, in memory of her late husband, the Pearson Kirkman Marfleet Lectureship.

The Governors accepted the trust, and have established and agreed to maintain the lectureship in perpetuity.

The Governors have undertaken to appoint at least once in every four years some person or persons to deliver a course of lectures in the University of Toronto on this foundation, and as the late Pearson Kirkman Marfleet, an American citizen, devoted constant thought to the public welfare of his own country, and also watched the growth of the Dominion of Canada with profound interest, the Governors have further undertaken that such person or persons as may from time to time be appointed shall, as far as possible, be chosen with regard to their special ability to set forth some phase or phases of the national movements of each or both countries.

The first course of lectures under this foundation was delivered on February 10th, 11th and 12th, 1915, by the Honourable William Howard Taft, Ex-President of the United States.

The second course of lectures was delivered on October 5th, 6th and 7th, 1921, by the Right Honourable Sir Robert Borden, G.C.M.G., P.C., LL.D.



## UNIVERSITY OF OXFORD

A student of this University who has completed two years of the course in Arts may be admitted to the status of a Junior Colonial Student at the University of Oxford, while a student who has completed three years, and has taken honours in the final examination or who has obtained second class honours in the Third or Fourth Year, may be admitted as a Senior Colonial Student. In each of these cases, on complying with certain conditions, a student may obtain his degree at Oxford in two years.

## UNIVERSITY OF CAMBRIDGE

The University of Toronto is affiliated to the University of Cambridge and matriculated students who have passed the examinations of the First and Second Years are entitled to admission to the privileges of affiliation, which enable a student to take his degree at Cambridge without completing the full period of residence

## FEES

All University fees, as also the fees of students enrolled in University College, are payable at the Bursar's Office in Simcoe Hall, between the hours of ten and one o'clock, except on Saturday.

The College fees of students enrolled in Victoria College are payable to the Fees Clerk of that College.

The College fees of students enrolled in Trinity College or St. Michael's College are payable to the Bursar of the College.

## I. UNIVERSITY FEES

Any student proceeding to a Bachelor's degree in the Faculty of Arts and enrolled in University College, or Victoria College, or Trinity College, or St. Michael's College, may attend the lectures of University professors and lecturers in the Faculty of Arts without payment of fees, except those imposed for laboratory supplies, but such students must register in the University.

## AD EUNDEM STATUM FEES

For admission, by certificate, to Second Year.. ..	\$15 00
For admission ad eundem statum.....	10 00

## LIBRARY FEE

The annual fee . . . . .	\$2 00
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Every student in attendance, proceeding to a Bachelor's degree in the Faculty of Arts, is required to pay at the time of the entry of his name with the Registrar the annual library fee.

No occasional or graduate student shall be admitted to the library save upon the payment of the annual fee.

## LABORATORY SUPPLY FEES

Charges for supplies shall include laboratory materials and instruments used by or for the student, and ordinary wear and tear of instruments, but not charges for waste, neglect and breakage, which are to be met out of a deposit to be fixed by the Professor.

The annual supply charges for a student shall be according to the following table:

## LABORATORY SUPPLY FEES—(Contd.)

COURSES	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
<sup>1</sup> Pass Course . . . . .	..		5	5
<sup>2</sup> Philosophy . . . . .			3	..
<sup>3</sup> Philosophy (English or History Op- tion). . . . .			3	
Psychology. . . . .	5	8	8	10,
<sup>4</sup> Commerce and Finance (B.A.) . .				3
Mathematics. . . . .	3	3	3	
Mathematics and Physics . . .	3	5	8	
Physics. . . . .	5	8	8	10
Astronomy and Physics ..				10
Biology . . . . .	5	9	12	20
Physiology and Biochemistry .	5	6	10	20
<sup>5</sup> Biological and Medical Sciences	5	6	10	20
Chemistry and Chemistry Mineralogy and Geology I . . . . .	5	5	13	10
<sup>6</sup> Chemistry Mineralogy and Geol- ogy II . . . . .	5	5	4	3
<sup>7</sup> Geology and Mineralogy . . .	5	9	3	3
Science (General) . . . . .	5	9	14	20
Household Science and Household Economics . . . . .	5	11	15	20

<sup>1</sup>The Laboratory Supply fee in the Third and Fourth Years is required only from those students who are taking the Household Science option.

<sup>2</sup>The Laboratory Supply fee is not required from students of St. Michael's College

<sup>3</sup>The Laboratory Supply fee is required from students electing <sup>1</sup>Psychology as a pass subject in the Third Year

<sup>4</sup>The Laboratory Supply fee is required from students taking a Science as a Pass subject.

<sup>5</sup>The fees for the Faculty of Medicine are not included.

<sup>6</sup>The fees for Drawing and Assaying are not included.

## HART HOUSE FEE

The annual fee. . . . . \$8 00

Every male student in attendance proceeding to a Bachelor's degree in the Faculty of Arts, is required to pay to the Bursar before December 1st the annual fee of eight dollars for the maintenance of Hart House. If this fee is not paid by the above date a penalty of two dollars will be imposed, making the total fee ten dollars.

## STUDENTS ADMINISTRATIVE COUNCIL FEE

The annual fee . . . . . \$3 00

Every male student in attendance proceeding to a Bachelor's degree in the Faculty of Arts, is required to pay to the Bursar at the time of the entry of his name with the Registrar the annual fee of three dollars for the maintenance of the Students' Administrative Council.

## WOMEN STUDENTS ADMINISTRATIVE COUNCIL FEE

The annual fee . . . . . \$3.00

Every woman student proceeding to a Bachelor's degree in the Faculty of Arts, is required to pay to the Bursar at the time of the entry of her name with the Registrar the annual fee of three dollars for the maintenance of the Women Students' Administrative Council.

## MEN'S PHYSICAL TRAINING FEE

The annual fee . . . . . \$5.00

Every male student in attendance, proceeding to a Bachelor's degree in the Faculty of Arts, is required to pay to the Bursar the annual Physical Training fee of \$5 00 at the opening of each session in which Physical Training is compulsory for such student.

## WOMEN'S PHYSICAL TRAINING FEE

The annual fee . . . . . \$4 00

Every woman student in attendance, proceeding to a Bachelor's degree and registered in University College, is required to pay to the Bursar the Physical Training fee of \$4.00 at the opening of each session in which Physical Training is compulsory for such student.

## SUPPLEMENTAL PHYSICAL TRAINING FEE

The supplemental fee . . . . . \$10.00

Every student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year and who must take this work during the Second or Third Year respectively of his or her course, will be required to pay to the Bursar at the opening of the session a supplemental fee of \$10.00 in addition to the prescribed Physical Training fee.

## EXAMINATION FEES

Students proceeding regularly to the B.A. degree.

For the June Senior Matriculation . . . . . \$15 00

For each examination other than June . . . . . 10 00

For each Supplemental examination . . . . . 10 00

Teachers' Course:

For examination in one subject of any year, each . . . . . 2 00

For repeating an examination in a subject in which a student has already failed . . . . . 5 00

Maximum fee . . . . . 10 00

A candidate who fails to pay his University fees on or before the first of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

A candidate who fails to send his application for examination by the day appointed for the receipt of such applications must pay an additional fee of one dollar.

#### DEGREE FEES

For the degree of B.A. . . . .	\$10 00
For admission <i>ad eundem gradum</i> (B.A.) . . . . .	20 00

#### MISCELLANEOUS FEES

For certificate of honour. . . . .	\$1 00
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The fee for admission *ad eundem statum*, or for dispensation from attendance upon lectures, or for certificates of honour, must be paid at the time of application.

A candidate who fails to pay his University fees on or before the first of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

### II. COLLEGE FEES

A graduate in Arts, who during his undergraduate course, was enrolled in University College, or Victoria College, or Trinity College, or St. Michael's College, may attend lectures free in the college in which he was so enrolled.

#### ENROLMENT (TUITION) FEE—BACHELOR OF ARTS COURSES

Every student proceeding to the degree of Bachelor of Arts shall, on each year's enrolment in University College, or Victoria College, or Trinity College, or St. Michael's College, pay an enrolment fee according to the following schedule, which fee shall include all instruction for which fees are chargeable except laboratory supply and library fees:—

Any course, if paid in full in October, except for students on probation in the First Year. . . . . \$75.00

By instalments:—

First instalment, if paid in October. . . . .	38.00
Second instalment, if paid in January . . . . .	38.00

Students on probation in the First Year—Any course, if paid in full in October . . . . . 80 00

By instalments:—

First instalment, if paid in October. . . . .	40.00
Second instalment, if paid in January. . . . .	41.00

## ANNUAL FEE—BACHELOR OF COMMERCE COURSE

Every student proceeding to the degree of Bachelor of Commerce shall, on each year's enrolment in University College, or Victoria College, or Trinity College, or St. Michael's College, pay an annual fee according to the following table:

Annual fee, including tuition, library and one annual examination (the College fee in each of the first, second, third and fourth years is \$50):—

If paid in full in October.... .. \$110 00

By instalments:—

First instalment, if paid in October ..... 55 00

Second instalment, if paid in January ..... 56 00

All the above fees are payable in advance. After October 31st, a penalty of \$1.00 per month will be imposed until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply. A student will not be admitted to any of the University lectures or laboratories who is in arrears for his fees.

## FEES FOR DISPENSATION

The enrolment fee for students receiving dispensation from attendance upon lectures in University College, or Victoria College, or Trinity College, or St. Michael's College, shall be \$10 for each term, in addition to the University fee of \$10. The payment of these fees entitles the student to supervision of "term work" prescribed in connection with his course.

## UNIVERSITY COLLEGE LITERARY AND ATHLETIC SOCIETY FEE

The annual fee ..... \$2 00

Every male student registered in University College and proceeding to a degree shall pay to the Bursar at the opening of the session an annual fee of \$2 for the maintenance of the University College Literary and Athletic Society.

## UNIVERSITY COLLEGE WOMEN UNDERGRADUATES ASSOCIATION

The annual fee ..... \$1.00

Every woman student registered in University College and proceeding to a degree shall pay to the Bursar at the opening of the session an annual fee of \$1.00 for the maintenance of the University College Women Undergraduates Association.

## UNIVERSITY COLLEGE WOMEN'S UNION

The annual fee. .... \$4.00

Every woman student registered in University College and proceeding to a Bachelor's degree is required to pay to the Bursar at the time of the entry of her name with the Registrar, the annual fee of four dollars for the maintenance of the Women's Union. A reduction will be made (a) in the case of those University College students who have paid four dollars for instruction in Athletics, and (b) in the case of graduates, and in these two cases the fee for the privileges of the Union will be reduced to three dollars.

## III. FEES FOR OCCASIONAL STUDENTS

"A course in laboratory work" means the continuous course of instruction in laboratory or practical work offered to students in any one year in any of the subjects in which laboratory work is or may be prescribed.

"A course of lectures" means the continuous course of instruction offered in any one year in any of the subjects in which instruction is or may be given.

Laboratory fees are divided into (a) Fees for practical instruction in the laboratory, (b) Charges for supplies, which are the same as for students proceeding to the degree. (See page 44 )

The payment of fees shall not entitle any occasional student to be admitted to the laboratory work of a later year without having taken that of the earlier year or years, unless this requirement is dispensed with by the Council of the Faculty on the recommendation of the Professor

The enrolment fee for an occasional student attending a course, or partial course, of lectures shall be as follows:—

	TUITION FEES	For the Session	For the Term
For a course in any one subject.. . . .		\$15 00	\$10 00
Maximum Fee .. . . .		75 00	40 00

All instruction fees are payable strictly in advance.

## EXAMINATION FEES

For examination in one subject of any year, each... . .	\$ 5.00
Maximum examination fee . . . . .	10 00

## PRIZES, MEDALS, SCHOLARSHIPS AND FELLOWSHIPS

No candidate will be permitted to hold more than one scholarship; but any one who would, but for this provision, have been entitled to a second scholarship, will have his name published in the lists.

All undergraduate scholars must sign a declaration of intention to proceed to a degree in Arts in this University, and must attend lectures in one of the Colleges for the academic year immediately following such examination. The Senate, however, on the recommendation of the Faculty, may, upon satisfactory reasons being shown, permit such scholar to postpone attendance upon lectures for a year. If at the end of the year a further postponement is necessary, special application must again be made. In every such case the payment of the scholarship will likewise be postponed. The scholarships are paid in three instalments—on November 20th, January 20th and March 20th; and before each payment a scholar is required to secure from the Registrar's Office a certificate of attendance upon lectures to be signed by two senior members of the staff.

No prize, scholarship or medal will be awarded to any candidate who has been placed lower than the first class in the department to which the prize, scholarship or medal is attached.

When the letter "U" is prefixed, the award is made by the Senate of the University on the recommendation of the Council of the Faculty as the result of competition open to the students of all the Colleges. In all other cases the letter indicates the governing body by which the award is made.—the Council of University College by the letter "C", the Senate of Victoria College by the letter "V", the Corporation of Trinity College by the letter "T", and the Council of St. Michael's College by the letter "M".

With the exception of the Jean Balmer Scholarship in Science of the First Year, all honours awarded by the Senate on the recommendation of the Faculty are open to the students of all the Colleges.

The competition for a College scholarship, medal or prize is confined to the students registered in that College and shall be subject to such regulations as the College may from time to time determine.

### PRIZES

#### FIRST YEAR

##### ITALIAN

U. The Italian Prize, the gift of the Minister of Foreign Affairs for the Kingdom of Italy.

Awarded in 1921 to Miss J. F. Struthers; 1922, N. P. H. Brown; 1923, E. K. Brown; 1924, Miss F. E. Boake.



## ENGLISH

- V. The Class of 1902 Prize, the gift of Professor C. E. Auger, B.A., of the value of \$10 to the student ranking highest in English of the Pass Course.

Awarded in 1921 to Miss R. J. Stewart; 1922, D. M. Campbell, 1923, A. E. Larke, 1924, Miss A. E. Cosh

- M. The Mahon Prize, the gift of John Mahon, Esq., of the value of \$25 to the student ranking highest in Honour English.

Awarded in 1923 to Miss P. M. Blake; 1924, no award.

- M. A prize of the value of \$10 to the student ranking highest in English of the Pass Course.

Awarded in 1921 to L. F. Barnett, 1922, Miss M. W. Coughlan, 1923, Miss M. J. Phelan, 1924, Miss A. O'Brien.

There will be no award in 1926.

## ETHICS

- U. The Tracy Prize, of the value of \$10, the gift of Professor F. Tracy, to the student who, obtaining First Class Honours in the Course in Philosophy (English or History Option) ranks highest in Ethics.

No award in 1922; 1923, Miss W. M. Hodges; 1924, C. E. J. Cragg.

## RELIGIOUS KNOWLEDGE

- M. A prize, the gift of the graduating class of 1921, of the value of \$25, to the student ranking highest in Religious Knowledge.

Awarded in 1924 to G. C. Power

## COMMERCE AND FINANCE

- U. A Prize, of the value of \$40, to the student ranking first in honours in the Course in Commerce and Finance

Awarded in 1924 to J. A. Emery and Miss M. I. Turnbull (*aeq.*)

There will be no award in 1926.

## SECOND YEAR

## ITALIAN

- U. The Italian Prize, the gift of the Minister of Foreign Affairs for the Kingdom of Italy.

Awarded in 1921 to Miss L. M. Latchford; 1922, Miss J. F. Struthers; 1923, N. P. H. Brown, 1924, E. K. Brown.

## ENGLISH

- C. The Alumnae Prize, the gift of the Toronto Alumnae, of the value of \$10 in books, to the student ranking highest in English Composition.

Awarded in 1921 to E. W. McInnis; 1922, C. S. Gulston; 1923, N. P. H. Brown; 1924, E. K. Brown.

- V. The Webster Prize, the gift of the late J. G. Hodgins, Esq., M.A., LL.D., I.S.O., of the value of \$10, to the student ranking highest in English of the Pass Course.

Awarded in 1921 to F. G. Ward; 1922, F. J. G. Cunningham; 1923, Miss C. I. Davidson; 1924, Miss S. M. Hughson.

- M. The Hughes Prize, the gift of Frank Hughes, Esq., of the value of \$25, to the student ranking highest in Honour English.

Awarded in 1923 to Miss B. V. Larochele, 1924, Miss P. M. Blake

- M. A Prize, of the value of \$10, to the student ranking highest in English of the Pass Course.

Awarded in 1921 to Miss A. B. Ballard; 1922, Miss M. R. Campbell; 1923, T. P. McLaughlin, 1924, Miss M. L. Burcher and Miss M. W. Coughlin (*aeq.*)

There will be no award in 1926

#### HEBREW

- V. The Robert Johnston Prize, the gift of the Rev. Professor J. F. McLaughlin, B.A., D.D., of the value of \$15, to the student ranking highest in Hebrew of the Pass Course.

Awarded in 1921 to T. C. Wilkinson, 1922, E. M. Hart, 1923, J. M. Deck, 1924, no award

#### PHILOSOPHY

- M. The Kernahan Prize, the gift of W. T. Kernahan, Esq., in memory of the late Rev. Gregory Kernahan, of the value of \$25, to the student ranking first in the examinations in Philosophy.

Awarded in 1921 to L. A. Cleary; 1922, L. F. Barnett, 1923, T. J. Murtha, 1924, no award.

### FIRST AND SECOND YEARS

#### ENGLISH

- V. The Regents' Prizes, of the value of \$10 each, will be awarded for the two best essays on a subject to be assigned by the Staff in the Department of English. Neither of these prizes will be granted twice to the same student.

Awarded in 1921 to F. G. Ward and Miss A. E. Howard; 1922, N. J. Endicott and Miss R. J. Stewart, 1923, Miss R. I. Jenking and D. J. Creighton; 1924, Miss M. E. H. Adams and J. A. Irving.

### THIRD YEAR

#### ITALIAN

- U. The Italian Prize, the gift of the Minister of Foreign Affairs for the Kingdom of Italy.

Awarded in 1922 to Miss L. M. Latchford, 1923, Miss J. F. Struthers, 1924, no award

#### ENGLISH

- V. The Hodgins Prize, the gift of the late J. G. Hodgins, Esq., M.A., LL.D., I.S.O., of the value of \$12, to the student ranking highest in English of the Pass Course.

No award in 1921, 1922, F. G. Ward, 1923, Miss K. E. Elliott, 1924, H. E. Dougall.

- M. The Pheian Prize, the gift of T. N. Phelan, Esq., of the value of \$25, to the student ranking highest in Honour English.  
Awarded in 1923 to E. C. LeBel, 1924, no award.
- M. The Dockeray Prize, of the value of \$25, to the student ranking highest in English of the Pass Course.  
Awarded in 1921 to Miss M. A. Hannan, 1922, C. B. Lanphier, 1923, no award; 1924, J. F. Flaherty.

#### ENGLISH BIBLE

- V. The Massey Bursaries, established by the late Hart A. Massey, Esq., one of \$25 and one of \$15, to the students ranking first and second at the examination in the English Bible.  
Awarded in 1921 to Miss F. D. Daly and Miss M. J. Chappell, 1922, Miss G. E. Metzler and A. D. Wart; 1923, E. R. Hall and J. L. Smith, 1924, J. A. C. Kell and H. E. Dougall.

#### PHILOSOPHY

- M. The Hanrahan Prize, of the value of \$25, the gift of W. T. Kernahan, Esq., in memory of the late John Hanrahan, Esq., to the student ranking first in the examinations in Philosophy.  
Awarded in 1921 to P. J. Bart, R. J. Dobell and L. J. Stock (*aeq.*); 1922, L. Cleary, 1923, L. F. Barnett, 1924, T. P. McLaughlin and T. J. Murtha (*aeq.*).

#### HOUSEHOLD SCIENCE

- U. The Anna Howe Reeve Prize, of the value of \$25, the gift of Dr. R. A. Reeve, "in memory of a true helpmate, whose unselfishness enabled the donor the better to discharge his duty to his Alma Mater". The Committee of Award consists of the President of the University, Professor Laird and Professor Benson.  
Awarded in 1921 to Miss K. E. Bennett, 1922, no award, 1923, Miss E. B. Hislop; 1924, Miss E. A. Jerome.

### FOURTH YEAR

#### ITALIAN

- U. The Italian Prize, the gift of the Minister of Foreign Affairs for the Kingdom of Italy.  
Awarded in 1921 to Miss G. M. Cook, 1922 and 1923, no award, 1924, Miss J. F. Struthers.

#### ENGLISH

- M. The Dockeray Prize, of the value of \$25, to the student ranking highest in English of the Pass Course.  
Awarded in 1921 to A. T. Leacy, 1922, Miss C. E. Coughlin and L. J. Stock (*aeq.*); 1923, Miss E. M. Dawson; 1924, Miss M. R. Campbell.

## FRENCH

- U. The Quebec Bonne Entente Prize, the proceeds from \$1,000, the gift of the delegates from the Province of Quebec to the Bonne Entente Movement.

The Prize shall be awarded on the results of (a) an essay in French written on one of a number of subjects in the Examination Hall, (b) translation from English into French, (c) an oral test in which regard shall be had especially to facility in speaking, understanding and pronouncing French. The Prize shall be in money, and it is suggested that it be expended in acquiring a more perfect knowledge of French.

Competitors for this prize must file applications with the Registrar not later than March 15th.

Awarded in 1921 to Miss G. M. Cook, 1922, Miss H. M. Cochrane; 1923, H. W. Hilborn, 1924, Miss K. M. Halford and Miss G. H. McKay (*aeq.*).

- M. The Belcourt Prize, of the value of \$25.

Awarded in 1924 to Miss A. M. Kavanagh

## CANADIAN CONSTITUTIONAL HISTORY

- V. The Robertson Prize, the gift of W. J. Robertson, Esq., B.A., LL.B., of the value of \$10, to the student ranking highest in Canadian Constitutional History.

Awarded in 1921 to M. J. Ayeaist; 1922, E. C. Guillet, 1923, R. G. Start; 1924, F. J. G. Cunningham.

## ETHICS

- C. The Tracy Prize, of the value of \$10, the gift of Professor F. Tracy, to the student who, obtaining Grade A in the Pass Course, ranks highest in Pass Ethics.

No award in 1922, 1923 and in 1924.

- T. CLASSICS

The Prince of Wales' Prize, \$18, for the highest first class honours in Classics

Awarded in 1921 to C. E. Phillips and J. Lowe (*aeq.*); 1922, 1923 and 1924, no award.

- T. MATHEMATICS

The Prince of Wales' Prize, \$18, for the highest first class honours in Mathematics.

No award in 1921; 1922, H. J. Stowe, 1923 and 1924, no award

## NATURAL SCIENCE

- T. A prize of \$15 for the highest first class honours in any graduating department of the Natural and Physical Sciences.

Awarded in 1921 to Miss R. M. Nevill, 1922, A. H. Gee, 1923 and 1924, no award.

## MODERN LANGUAGES

- T. A prize of \$15 for the highest first class honours in Modern Languages. No award in 1921, 1922, 1923 and in 1924.

## ENGLISH AND HISTORY

- T. A Prize of \$15 for the highest first class honours in English and History.  
No award in 1921, 1922, J. D. Ketchum, 1923 and 1924, no award.

## MODERN HISTORY

- T. A Prize of \$15 for the highest first class honours in Modern History.  
No award in 1921, 1922, 1923 and in 1924

## PHILOSOPHY

- T. A Prize of \$15 for the highest first class honours in Philosophy.  
No award in 1921, 1922, 1923 and in 1924

## POLITICAL SCIENCE

- T. A Prize of \$15 for the highest first class honours in Political Science.  
No award in 1921 and in 1922, 1923, J. F. Day, 1924, no award.

## COMMERCE AND FINANCE

- T. A Prize of \$15 for the highest first class honours in Commerce and Finance.  
No award in 1921, 1922, 1923 and in 1924.

## PASS COURSE

- T. A Prize of \$15 for the highest ranking in Grade A Standing in the Pass Course.  
No award in 1921 and in 1922, 1923, Miss H. J. Hope; 1924, Miss A. E. Gillard.

## THIRD AND FOURTH YEARS

## BIBLICAL GREEK

- V. The Wallbridge Prize, the gift of the late A. F. Wallbridge, Esq., of the value of \$10, to the student ranking first in Life and Letters of St. Paul.  
Awarded in 1921 to C. L. Wood, 1922, F. J. Gardiner, 1923, C. H. Dickinson; 1924, A. E. Menzies.

## NEW TESTAMENT INTRODUCTION

- V. The Joy Wallace Prize, endowed by the Rev. Professor F. H. Wallace, M.A., D.D., of the value of \$15, to the student ranking first in New Testament Introduction and Exegesis.  
Awarded in 1921 to W. F. Monroe, 1922, C. L. Wood, 1923, S. A. Moote; 1924, C. H. Dickinson.

## ALL THE YEARS

## JEWISH HISTORY, LITERATURE, ETC.

- U. The Menorah Prize, the gift of B. M. Greene, Esq., of the value of \$50, is open for competition to all undergraduates in attendance at the University. On the recommendation of the examiners the prize will be awarded at the close of the session to the student submitting the best essay on some subject, approved by the President, in Jewish

History, Literature, etc. Essays, under pseudonym, must be submitted, not later than May 1st, to the Registrar, from whom the list of approved subjects may be obtained

No award in 1922, 1923 and in 1924.

#### FRENCH

- C. The Squair French Prose Prize, of the annual value of \$10, endowed by Professor Squair, is open for competition among students in attendance upon lectures in University College. The award shall be made annually by the Council of University College on the recommendation of the teaching staff in French. The books awarded are to be chosen by the winner after consultation with the staff in French. Competitors for this prize must file applications with the Registrar of University College not later than March 15th.

Awarded in 1921 to R. A. Allen; 1922, Miss D. L. Arthur; 1923, Miss H. E. Hetherington; 1924, Miss J. E. Lyall.

- M. The Belcourt Prize, the gift of Senator Belcourt, of the value of \$25, to the student who in writing and speaking uses the best French.

Awarded in 1924 to Miss A. M. Kavanagh.

#### ENGLISH

- V. The Lily Denton Keys Prize, of the annual value of \$25, endowed by Mr. Norman A. Keys, B.A., as a memorial for his wife, Lily Denton, B.A., is open for competition among all the Arts undergraduates of Victoria College. The subject of the essay shall be "The Present Day Novel"

Awarded in 1921 to D. G. Creighton; 1922, no award, 1923, Miss K. M. Davies, 1924, N. J. Endicott.

- M. The Hughes Prize, the gift of Frank Hughes, Esq., of the value of \$25, to the student who in speaking and writing uses the best English.

Awarded in 1923 to E. C. Le Bel, M. C. O'Neill (*acq.*), 1924, M. E. Callaghan.

#### NEW TESTAMENT HISTORY

- V. The Ryerson Prize, the gift of the late J. G. Hodgins, Esq., M.A., LL.D., I.S.O., of the value of \$12, to the student ranking first in Synoptic Gospels.

Awarded in 1921 to J. W. Button; 1922, A. E. A. Menzies; 1923, R. E. Gosse, 1924, C. C. Oke.

#### ORATORY

- V. The Michael Fawcett Prize of \$40 is awarded annually for "the best extempore oration" on a subject to be assigned at the commencement of each college year by the trustees of the fund. This prize is open to all candidates on probation for the ministry of the Methodist Church. Awarded in 1921 to W. J. H. Smyth, 1922, D. M. Stinson, 1923, C. H. Dickinson; 1924, F. E. Vipond

## GREEK

- T. A Prize of \$20 for Greek Prose.  
No award in 1921, 1922, 1923 and in 1924.

## LATIN

- T. A Prize of \$20 for Latin Verse  
No award in 1921, 1922, 1923 and in 1924.
- T. A Prize of \$20 for Latin Essay.  
No award in 1921, 1922, 1923 and in 1924

## GREEK or LATIN

- T. A Prize of \$20 for an essay in English on some subject of classical study.  
No award in 1921, 1922, 1923 and in 1924

## FRENCH

- T. A Prize of \$20 for a French Essay  
No award in 1921, 1922, 1923 and in 1924.

## ENGLISH

- T. A Prize of \$20 for an English Essay.  
No award in 1921, 1922 and in 1923; 1924, G. Sparling, Miss A. N. Wilson *proxime accessit*.
- T. A Prize of \$20 for an English Poem.  
Awarded in 1921 to Miss D. M. Sanders, P. A. Child *proxime accessit*; 1922 and 1923, no award, 1924, C. V. Kister (Honourable mention).  
The subjects of these Trinity College Prizes will be posted on the College notice board.

## HELLENISTIC GREEK

- V. The Driver Prize of \$10 is awarded annually on the result of an examination held in September on the Septuagint and allied versions. The prize is to be open to undergraduate and graduate students.  
No award in 1921, 1922, 1923 and in 1924

## MEDALS

## SECOND YEAR

## THE PASS COURSE

- U. The Governor-General's Silver Medal will be awarded to that candidate who, having Grade A standing in the Second Year, has the highest average percentage of marks obtained at the examinations of the First and Second Years, such examinations having been taken in two consecutive calendar years.  
The discretion of the examiners, as in the examination for the Governor-General's Gold Medal, shall apply also to this examination.  
Awarded in 1921 to Miss D. L. Agnew; 1922, Miss A. E. Gillard, 1923, Miss M. S. R. Boyd, 1924, no award.

## FOURTH YEAR

## GENERAL PROFICIENCY

- U. The Governor-General's Gold Medal is intended for the encouragement of the study of English in those departments in which English is not an integral portion of the work of the third and fourth years and will be awarded to that candidate who, taking not less than sixty-six per cent. in English (as defined below), and not less than seventy-five per cent. in some one of the following honour departments:—(a) Classics, (b) Greek and Hebrew, (c) Oriental Languages, (d) Modern History, (e) Political Science, (f) Commerce and Finance, (g) Philosophy, (h) Mathematics, (i) Physics, (j) Biology, (k) Physiology and Biochemistry, (l) Biological and Medical Sciences, (m) Chemistry and Mineralogy, (n) Chemistry, (o) Geology and Mineralogy, (p) Household Science, (q) Household Economics, (r) Science (General)—shall also take the best aggregate mark in English and the Honour Department.

English shall be understood to mean only the papers based on English Courses 4a, 4b and 4e, as prescribed for Honour Courses. The essays prescribed for Honour students are not taken into account in this award.

In order to obviate any unfairness arising from a different system of marking in different departments, the principle shall always be adopted of raising the marks of the best candidate in the first class of each department to the maximum, and those of the others in proportion, unless the examiners of any department report that the marks of the best candidate in their department are not of sufficient merit to be so raised.

The Registrar shall publish not only the name of the successful candidate, but also the names of all candidates who, by satisfying the above conditions, are eligible for the award.

Competitors for this medal must file applications with the Registrar not later than March 15th.

Awarded in 1921 to T. R. S. Broughton, 1922, Miss G. V. Lewis and Miss M. V. Ray, (*aeq.*), 1923, F. G. Ward, Miss R. V. H. Kendrick *proxime accessit*, 1924, F. J. G. Cunningham, Miss I. F. Irwin and L. F. Barnett *proxime accesserunt*

- V. The Prince of Wales' Gold Medal, endowed by His late Majesty King Edward VII, will be awarded to the student who ranks first in Grade A Standing in the Pass Course.

Awarded in 1921 to J. W. Button, 1922, F. E. Vipond; 1923, no award, 1924, Miss F. M. Spence

- V. The Prince of Wales' Silver Medal, endowed by His late Majesty King Edward VII, will be awarded to the student who ranks second in Grade A Standing in the Pass Course.

No award in 1921; 1922, S. N. F. Chant; 1923, no award, 1924, F. S. Rivers



- V. The Governor-General's Silver Medal will be awarded to the candidate standing highest in Honour Modern English of the Fourth Year examination, provided he has taken First or Second Class in his Honour Department or Grade A Standing in the Pass Course at graduation, First Class Honour men having the preference and provided that this English is not an integral portion of his course. In case such a candidate has already received the Governor-General's Gold Medal, the next in rank shall be eligible.

Honour Modern English shall be understood to mean only the papers based on English Courses 4a, 4b and 4c. The essays prescribed for Honour students are not taken into account in this award.

No award in 1921, T. R. S. Broughton (mention), 1922, no award; 1923, W. H. Trethewey, 1924, F. J. G. Cunningham (mention), Miss I. F. Irwin.

- T. The Governor-General's Silver Medal will be awarded to the student taking the best degree, provided that First Class Honours shall have been obtained in an Honour Course or Grade A Standing in the Pass Course. Awarded in 1921 to Miss R. M. Nevill, 1922, A. H. Gee, H. J. Stowe *proxime accessit*, 1923, J. F. Day, 1924, Miss A. E. Gillard.

#### CLASSICS

- C. The McCaul Medal (Gold), established in 1886 by the late W. H. C. Kerr, M.A., Gold Medallist in Classics of 1859, in memory of the Rev. John McCaul, LL.D., First Professor of Classics, and First President of University College. It was presented by Mr. Kerr from 1886 up to his death, and from 1891 to 1894, after his death, by his widow. Since then the donors have been in 1895 John Hoskin, K.C., LL.D., Chairman of the Board of Trustees 1906-1910; in 1896 Nicol Kingsmill, M.A., K.C., Classical Medallist of 1856; in 1897, A. M. Crombie, Esq., of Montreal, in memory of his brothers Ernestus Crombie, M.A., Gold Medallist in Classics of 1854, and Marcellus Crombie, M.A., LL.B., Gold Medallist in Classics of 1857; in 1898 and 1899 William Dale, M.A., Gold Medallist in Classics of 1871; in 1900 the late John Fletcher, M.A., LL.D., Gold Medallist in Classics of 1872, and Maurice Hutton, M.A., LL.D., in 1901 Adam Carruthers, M.A., Gold Medallist in Classics of 1880; in 1902 W. S. Milner, M.A., Gold Medallist in Classics of 1881; in 1903 the late G. W. Johnston, Ph.D.; in 1904-1922 the Hon. Sir J. M. Gibson, M.A., LL.D., by whom it was endowed in 1922.

The winners of the McCaul Medal have been as follows.

1886, W. P. Mustard; 1887, E. O. Sliter; 1888, H. J. Crawford (*ob.*), 1889, H. J. Cody; 1890, James Colling, 1891, C. A. Stuart, 1892, F. W. Shipley; 1893, F. B. R. Hellems, 1894, J. H. Brown (*ob.*), 1895, W. T. F. Tambllyn; 1896, Donald McFayden; 1897, R. O. Jolliffe; 1898, Miss Florence E. Kirkwood; 1899, W. H. Alexander; 1900, Miss Landon Wright; 1901, E. J. Kylie (*ob.*); 1902, E. H. Oliver; 1903, A. G. Brown;

1904, W. H. Tackaberry (*ob.*); 1905, S. A. Cudmore; 1906, R. W. Hart; 1907, W. A. Rae; 1908, Miss C. M. Knight, 1909, A. G. Hooper; 1910, no award, 1911, C. N. Cochrane, 1912, C. H. Carruthers, 1913, H. V. Wrong (*ob.*); 1914, D. Breslove, 1915, H. R. Kemp, 1916, W. M. Hugill; 1917, Miss E. A. Sinclair, 1918, no award, 1919, Miss E. Harris; 1920, Miss M. A. Dickinson; 1921, H. L. Tracy; 1922, Miss M. C. Needler; 1923, L. A. MacKay, 1924, no award.

- V. The Edward Wilson Gold Medal, founded by the late Bishop Edward Wilson in memory of his son Edward Wilson.

Awarded in 1921 to T. R. S. Broughton, 1922, no award; 1923, Miss R. V. H. Kendrick, 1924, H. N. Couch.

- V. The S. H. Janes Silver Medal.

No award in 1921, 1922 and in 1923; 1924, Miss I. F. Irwin.

#### MODERN LANGUAGES

- C. The Governor-General's Silver Medal.

Awarded in 1921 to R. A. Allen and Miss G. M. Cook (*aeq.*), 1922, Miss G. R. Bird and Miss K. D. Cordingley (*aeq.*), 1923, Miss C. P. Cohen; 1924, P. Matenko.

- V. The J. J. Maclaren Gold Medal.

Awarded in 1921 to Miss F. E. Rodman; 1922, no award; 1923, H. W. Hilborn, 1924, Miss G. H. McKay.

- V. The S. H. Janes Silver Medal.

No award in 1920; 1921, Miss M. H. R. Powers; 1922, no award; 1923, Miss M. G. Bailey; 1924, no award.

#### ENGLISH (4a, 4b, 4d)

- V. The Reginald Heber Manning Jolliffe Gold Medal, founded by his mother, in memory of Lieutenant R. H. M. Jolliffe, who fell at Vimy Ridge, April 9th, 1916.

Awarded in 1922 to Miss J. V. McClenaghan, Miss M. V. Ray (mention); 1923, Miss L. M. Coburn, 1924, N. J. Endicott and Miss R. J. Stewart (mention), Miss S. M. Davidson.

#### ENGLISH, ENGLISH AND HISTORY

- V. The Regents' Gold Medal.

Awarded in 1924 to N. J. Endicott.

- M. The Sir Bertram Coghill Alan Windle Gold Medal.

Awarded in 1924 to E. C. Le Bel and J. V. Burke (*aeq.*).

#### POLITICAL SCIENCE

- V. The J. Reginald Adams Gold Medal, established by Rev. and Mrs. G. K. B. Adams as a memorial of their son Lieut. J. Reginald Adams who died of wounds at Etaples, France, November 26th, 1917.

No award in 1921, 1922 and in 1923, 1924, F. J. G. Cunningham.

- V. The J. Reginald Adams Silver Medal.

No award in 1921, 1922, 1923 and in 1924

## PHILOSOPHY, PHILOSOPHY (ENGLISH OR HISTORY OPTION)

- V. The E. J. Sanford Gold Medal.  
No award in 1921 and in 1922, 1923, S. J. Mathers, 1924, R. E. Gosse and H. Moores (*aeg*)
- V. The Regents' Gold Medal.  
Awarded in 1924 to Miss R. J. Stewart.
- V. The S. H. Janes Silver Medal.  
No award in 1921 and in 1922; 1923, H. J. S. Howey, 1924, Miss J. A. B. Maitland.
- M. The Mercier Gold Medal  
Awarded in 1924 to L. F. Barnett.

## MATHEMATICS AND PHYSICS

- V. The Regents' Gold Medal.  
Awarded in 1922 to Miss A. K. Rehder, 1923, Miss R. Carnahan, 1924, Miss M. E. Depew.
- V. The S. H. Janes Silver Medal.  
Awarded in 1921 to L. W. Rentner; 1922, E. C. Horwood; 1923, W. L. Webster; 1924, E. H. Graham

## PHYSICS

- U. The James Loudon Gold Medal, the gift of the local Committee for The Toronto Meeting of the American Association for the Advancement of Science. Awarded to the candidate ranking highest in first class honours.  
Awarded in 1921 to L. W. Rentner, 1922, Miss M. B. Kearney, 1923, Miss R. Carnahan; 1924, Miss K. Baird.

## ASTRONOMY AND PHYSICS

- U. The Royal Astronomical Society of Canada Gold Medal, awarded to the candidate obtaining the first place in first class honours.  
No award in 1921, 1922, 1923 and in 1924

## SCIENCE

- V. The G. A. Cox Gold Medal, the gift of Mr. Herbert C. Cox  
Awarded in 1921 to A. E. R. Westman; 1922, J. H. Couch; 1923, G. R. Balfour; 1924, Miss V. I. Jones.
- V. The Regents' Gold Medal  
Awarded in 1922 to L. C. Irvine; 1923, Miss M. E. Craig, 1924, Miss M. B. R. Fawcett
- V. The S. H. Janes Silver Medal  
Awarded in 1921 to H. D. Brown, 1922, J. M. Luck and Miss K. E. Bennett; 1923, Miss K. G. Crosby and Miss M. A. Caldwell, 1924, no award.

## ALL THE YEARS

## NATURAL SCIENCE

- U. The Cawthorne Medal, the gift of F. T. Shutt, M.A., awarded on the recommendation of the Natural Science Association.  
No award in 1921, 1922, 1923 and in 1924.

# SCHOLARSHIPS AND FELLOWSHIPS

## FIRST YEAR

### CLASSICS

- C. The Moss Scholarship, of the value of \$60, founded by subscription in honour of the late Hon. Chief Justice Thomas Moss.  
No award in 1921; 1922, F. W. Beare, 1923, R. R. H. Page; 1924, Miss H. I. MacTaggart.
- V. The Robertson Scholarship, of the value of \$50, the gift of Professor J. C. Robertson, M.A.  
Awarded in 1921 to Miss I. F. Irwin; 1922 and 1923, no award; 1924, J. E. Liddy.

### SEMITIC LANGUAGES or GREEK AND HEBREW

- T. The Pettit Scholarship, of the value of \$40, with free tuition for three years, provided the scholar obtains first class honours at subsequent examinations.  
No award in 1921, 1922, 1923 and in 1924.

### ORIENTAL LANGUAGES

- V. The A. P. Misener Scholarship of the value of \$25, the gift of the Rev. W. A. Potter, M.A., B.D., in memory of the late Rev. Professor Misener.  
No award in 1921; 1922, F. R. Vanderburgh; 1923, R. M. Dingwall; 1924, no award.

### MODERN LANGUAGES

- C. The Edward Blake Scholarship, of the value of \$60, the gift of the late Hon. Edward Blake, formerly Chancellor of the University.  
Awarded in 1921 to Miss K. M. Halford and Miss M. Spence (*aeq.*); 1922, Miss M. J. MacEwan; 1923, E. K. Brown, 1924, Miss E. B. Abbott and Miss M. H. Wickware (*aeq.*).

### POLITICAL SCIENCE

- U. The Bankers' Scholarship, of the value of \$70, the gift of the Bank of Toronto, the Canadian Bank of Commerce, the Dominion, Imperial, Standard, and Traders Banks, and the Union Bank of Lower Canada.  
Only such candidates are eligible as have passed the examination of the First Year and as may undertake to proceed to graduation in the Department of Political Science. A special examination on some special text-book of history or finance will be held at the time of the Supplemental examination in September. This scholarship is not tenable with any other.

The prescribed text-books are as follows—

1925: HENDERSON, *Supply and Demand* (Cambridge Economic Texts).

1926. KNAPP, *State Theory of Money*

No award in 1921, 1922, W. W. Goforth; 1923, H. A. Stark, 1924, E. M. Reid.

## MATHEMATICS

- U A Scholarship, of the value of \$50.  
No award in 1923, 1924, M. A. Nicholas.

## MATHEMATICS AND PHYSICS

- U. The Alexander T. Fulton Scholarship, of the value of \$60, the gift of the late Alexander T. Fulton, Esq.  
Awarded in 1921 to F. B. Relyea, 1922, R. G. Stagg; 1923, J. D. Burk; 1924, G. deB. Robinson.

## NATURAL AND PHYSICAL SCIENCES

- U The First Alexander T. Fulton Scholarship, of the value of \$50, the gift of the late Alexander T. Fulton, Esq.  
Awarded in 1921 to O. C. H. Kitching, 1922, W. J. B. Dickson; 1923, Miss D. F. Forward; 1924, E. H. Bensley.
- U. The Second Alexander T. Fulton Scholarship, of the value of \$40, the gift of the late Alexander T. Fulton, Esq.  
Awarded in 1921 to W. S. Keith; 1923, A. W. H. Needler, 1924, Miss B. M. Cain.
- U. The Third Alexander T. Fulton Scholarship, of the value of \$30, the gift of the late Alexander T. Fulton, Esq.  
Awarded in 1921 to H. R. Hugill, 1923, L. J. Harris; 1924, H. B. Collier. The Second and Third Scholarships were awarded in 1922 to J. L. Hart and W. R. Watson (*aeq.*).
- U. The Jean Balmer Scholarship in Science, of the value of \$50, the gift of Mrs. Jane Balmer in memory of her daughter Miss Jean Balmer, B.A., and in fulfilment of the wish expressed in the will of another daughter Miss Eliza M. Balmer, B.A.  
This Scholarship is open for competition only to students registered in University College.  
Awarded in 1921 to W. S. Keith, 1922, J. L. Mark and W. R. Watson (*aeq.*); 1923, A. W. H. Needler, 1924, E. H. Bensley.

## ANY HONOUR COURSE

- U. The Robert Bruce Scholarship, of the value of \$100, founded from the estate of the late Robert Bruce of Quebec. This scholarship is open only to students (a) who are of Scottish extraction, (b) who have complete Matriculation in this University as at the date of entrance, (c) who without some assistance would be hampered in entering upon a course of study in the University. A student who already holds a scholarship of the value of at least \$100, exclusive of free tuition, cannot qualify for the above scholarship. Application for this scholarship should be made to the Registrar of the University not later than November 1st.

## PASS COURSE

- M. The Knights of Columbus Scholarships, of the value of \$25 each, with free tuition for one year, to the four students ranking highest at the

examination of the First Year, on condition that such students in the following session enter the course in Honour Philosophy of the Second Year or any Honour Course of the First Year.

Awarded in 1921 to L. F. Barnett, W. Gavard, G. B. Keogh and Miss D. Fleury; 1922, Miss M. E. Carroll, J. F. Flaherty, H. J. Lippert, and Miss M. D. Smith, 1923, J. P. Kane, Miss M. J. Phelan, Miss N. C. Story and B. W. Harrigan, 1924, G. C. Power, Miss A. O'Brien, C. O'Keefe

## SECOND YEAR

### CLASSICS

- C. The William Mulock Scholarship, of the value of \$60, the gift of the Hon Sir William Mulock, M.A., LL.D., for many years Vice-Chancellor, and later Chancellor of the University.

Awarded in 1921 to L. A. MacKay; 1922, no award; 1923, F. W. Beare; 1924, Miss D. H. Wright.

- T. The Hart-Moorhouse Scholarship, of the value of \$40, the gift of Alumni, commemorating Messrs. W. Hart and A. C. Moorhouse, who were drowned in their graduating year, 1906, to the student ranking highest in first class honours in Classics, or, failing these, in English and History with the classical option.

No award in 1921 and in 1922, 1923, A. B. Robertson; 1924, no award

### MODERN LANGUAGES

- C. The George Brown Scholarship, of the value of \$60, founded in honour of the late Hon. George Brown.

Awarded in 1921 to H. R. Sneddon; 1922, Miss M. L. Asman and Miss K. M. Halford (*aeq*); 1923, Miss M. J. MacEwan, 1924, E. K. Brown.

### FRENCH

- V. The Essa Van Dusen Dafoe Scholarship, of the value of \$50, the gift of Dr. W. A. Dafoe, in memory of his wife, Essa Van Dusen, to be awarded annually to the student standing highest in a special examination in both oral and written French to be held in the Easter Term.

Awarded in 1921 to H. W. Hilborn, 1922, Miss G. H. McKay, 1923, Miss A. G. Nelson, 1924, Miss M. E. Balkwill.

### ORIENTAL LANGUAGES

- V. A Scholarship of \$50, the gift of the Rev. Professor J. F. McLaughlin, B.A., D.D., and others

Awarded in 1921 to F. G. Ward; 1922, F. E. Vipond, 1923 and 1924, no award.

### PHILOSOPHY

- U. The John Macdonald Scholarship, of the value of \$50, the gift of the late Hon. John Macdonald.

Awarded in 1921 to S. J. Mathers, 1922, H. Moores, 1923, C. G. Park; 1924, C. A. Baxter.

- T. A Scholarship in Mental and Moral Philosophy, which entitles the holder to free tuition in the Third Year and in the Fourth Year, if he obtains first class honours in the Second and Third Year.

Awarded in 1921 to J. S. D. Nation, 1922, 1923 and 1924, no award.

#### POLITICAL SCIENCE

- U. The First Alexander Mackenzie Scholarship, of the value of \$75, the gift of the friends of the late Hon. Alexander Mackenzie.

Awarded in 1921 to C. P. Halliday, 1922, F. J. G. Cunningham, 1923, D. M. Fleming; 1924, Miss I. M. Gringorten.

- U. The Second Alexander Mackenzie Scholarship, of the value of \$50, the gift of the friends of the late Hon. Alexander Mackenzie.

No award in 1921, 1922, J. G. Kelly; 1923 and 1924, no award.

- T. A Scholarship in Political Science which entitles the holder to free tuition in the Third Year and in the Fourth Year, if he obtains first class honours in his Second and Third Year.

No award in 1921, 1922, 1923 and in 1924

#### MATHEMATICS AND PHYSICS

- U. The William Mulock Scholarship, of the value of \$60, the gift of the Hon. Sir William Mulock, M.A., LL.D., for many years Vice-Chancellor, and later Chancellor of the University.

Awarded in 1921 to J. P. Dandy, 1922, Miss K. Baird; 1923, no award; 1924, J. D. Burk

#### PHYSICS

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., formerly Chancellor of the University.

No award in 1921, 1922, Miss B. M. Reid; 1923 and 1924, no award.

#### BIOLOGICAL AND MEDICAL SCIENCES

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., formerly Chancellor of the University.

Awarded in 1921 to G. R. Balfour, 1922, W. S. Keith; 1923, W. J. B. Dickson; 1924, L. J. Harris

#### (1) BIOLOGY and (2) GEOLOGY AND MINERALOGY

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., formerly Chancellor of the University.

No award in 1921 and in 1922; 1923, (1) W. R. Watson, (2) C. S. Hanes; 1924, (1) D. S. Rawson, (2) A. W. H. Needler.

## CHEMISTRY MINERALOGY AND GEOLOGY

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., formerly Chancellor of the University.

No award in 1921, 1922, J. Cryer; 1923 and 1924, no award.

In case one or more of the four foregoing scholarships is not awarded, the amount rendered available will be divided among the other scholars, but no award shall exceed \$60.

## CHEMISTRY MINERALOGY AND GEOLOGY

- V. The James G. Burns Scholarship, of the value of \$50, endowed by the Rev. Dr. and Mrs. R. N. Burns as a memorial of their son Major James G. Burns, D.S.O., B.A., killed in action at Cambrai, France, September 28th, 1918.

Awarded in 1922 to O. C. H. Kitching; 1923 and 1924, no award.

## THIRD YEAR

## CLASSICS

- C. The Moss Scholarship, of the value of \$60, founded by subscription in honour of the late Hon. Chief Justice Thomas Moss.  
Awarded in 1921 to J. E. A. Johnstone, 1922, L. A. MacKay, 1923, no award, 1924, F. W. Beare.

## MODERN LANGUAGES

- C. The Julius Rossin Scholarship, of the value of \$60, the gift of the late Julius Rossin, M.A.  
Awarded in 1921 to Miss D. L. Arthur; 1922, Miss C. P. Cohen, 1923, Miss K. M. Halford and P. Matenko (*aeq.*), 1924, Miss M. J. MacEwan.

## ENGLISH AND HISTORY

- V. The George Dennis Morse Scholarship, of the value of \$50, founded by the late Mrs. Elizabeth Morse.  
No award in 1922; 1923, Miss G. H. McKay; 1924, D. G. Creighton.

## ENGLISH (3a, 3d, 3e)

- V. The Reginald Heber Manning Jolliffe Scholarship, of the value of \$30, founded by his mother in memory of Lieutenant R. H. M. Jolliffe, who fell at Vimy Ridge, April 9th, 1918.  
Awarded in 1921 to J. C. Eastcott, 1922, Miss E. R. Whittington; 1923, N. J. Endicott, 1924, D. G. Creighton (mention)

## PHILOSOPHY

- C. The John Macdonald Scholarship, of the value of \$50, the gift of the late Hon. John Macdonald.  
Awarded in 1921 to W. M. Mustard; 1922 and 1923, no award, 1924, F. H. Page.
- V. The George John Blewett Scholarship, of the value of \$50, the gift of Mrs. G. J. Blewett in memory of the late Rev. Professor Blewett.  
No award in 1921, 1922, S. J. Mathers, 1923, H. Moores; 1924, C. G. Park.



## POLITICAL SCIENCE

- U. The First Alexander Mackenzie Scholarship, of the value of \$75, the gift of the friends of the late Hon. Alexander Mackenzie.  
Awarded in 1921 to W. G. Thomson, 1922, M. D. Smith, 1923, J. G. Kelly
- U. The Second Alexander Mackenzie Scholarship, of the value of \$50, the gift of the friends of the late Hon. Alexander Mackenzie.  
Awarded in 1921 to R. J. Wood, 1922, no award, 1923, P. N. Currie.  
These scholarships were awarded in 1924 to D. M. Fleming and W. F. Spence (*aeq.*)

## MATHEMATICS AND PHYSICS

- U. A Scholarship of the value of \$60, the gift of the Local Committee for the Toronto meeting of the American Association for the Advancement of Science. In awarding this scholarship, the theoretical and practical work in this department will be estimated in the proportion of three to one.  
Awarded in 1921 to Miss F. F. Halliday; 1922, Miss C. I. Lister and W. L. Webster (*aeq.*), 1923, E. H. Graham; 1924, Miss E. Cohen.

## MATHEMATICS AND PHYSICS, PHYSICS

- U. The Ramsay Scholarship, of the value of \$50, the gift of the late Mr. William Ramsay, of Bowland, Scotland. The scholarship is open for competition to all students in the Third Year in the courses of (1) Physics and (2) Mathematics and Physics. The award is made to the student who obtains the highest aggregate standing in experimental physics during the first three years of his course and who elects to proceed to the B.A. Degree in Physics in his final year.  
Awarded in 1921 to E. C. Horwood, 1922, Miss R. Carnahan; 1923, Miss K. Baird, 1924, Miss E. Cohen and M. J. Liggett (*aeq.*)

## PHYSICS

- U. A scholarship of the value of \$55, the gift of the Local Committee for the Toronto meeting of the American Association for the Advancement of Science.  
No award in 1921, 1922, 1923 and in 1924.

## BIOLOGICAL AND MEDICAL SCIENCES

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.  
Awarded in 1921 to J. H. Couch, 1922, G. R. Balfour; 1923, W. S. Keith; 1924, H. F. P. Grafton

## BIOLOGY

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.

Awarded in 1921 to Miss K. M. Millar, 1922, H. H. MacKay; 1923, no award, 1924, W. R. Watson.

In case either of the two foregoing scholarships is not awarded, the amount rendered available will be given to the scholar in the other department.

#### CHEMISTRY MINERALOGY AND GEOLOGY

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.

No award in 1921, 1922, S. D. Holmes, 1923, H. R. Hugill, 1924, H. J. Rose

#### GEOLOGY AND MINERALOGY

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.

No award in 1921, 1922 and 1923, 1924, R. J. Watson.

In case either of the two foregoing scholarships is not awarded, the amount rendered available will be given to the scholar in the other department.

### FOURTH YEAR

#### HONOUR COURSE

- T. The Jubilee Scholarship, of the value of \$120, tenable for two years, was founded by the Society for the Propagation of the Gospel, and is awarded yearly to the most deserving Bachelor of the Year who has obtained at least second class honours. On admission to the scholarship a declaration must be signed by the holder that it is his purpose to complete the Divinity Course in Trinity College and to present himself as a candidate for Holy Orders. Should he fail to do so, he will be held bound to refund to the College such proceeds of the scholarship as he shall have received.

Awarded in 1921 to J. Low, 1922, no award, 1923, L. A. Spencer; 1924, F. A. Smith.

### FIRST AND THIRD YEARS

The McClure Scholarship of \$45 will be awarded to the student of the First, Second or Third Year Arts who takes the highest standing in First Year Hebrew at the University, and who is preparing for the study of Theology in Knox College.

In order to hold this scholarship a student must give attendance on the lectures of the session in which the scholarship is won, and must sign a declaration that it is his intention to enter the ministry of the Presbyterian Church in Canada, and to prosecute theological study in Knox College.

## ALL THE YEARS

- U. The Aikins Scholarships in English, the gift of Sir J. A. M. Aikins, M.A., LL.D., who has provided an endowment of \$5,000 for these scholarships.
- U. The Khaki University and Y.M.C.A. Memorial Scholarship Fund, established by the Khaki University Committee. At the present time this fund is being used to make loans to returned-soldier students of the higher years. Applications for such loans should be made to the President of the University.
- U. The S. Ubukata Fund of \$10,000, the gift of Mr. S. Ubukata, provides for the establishment of prizes, medals, scholarships and loans for which Japanese students of all faculties and colleges may be eligible. Information regarding the conditions of award may be obtained from the Registrar of the University.
- V. An endowment of \$13,500, provided by a bequest of the late W. E. H. Massey, Esq., will furnish a number of additional scholarships which are awarded under the terms of the will in aid of deserving students.
- V. The Mrs. Massey Treble Scholarship, the interest on an endowment of \$10,000, the bequest of the late Mrs. Lillian Frances Massey Treble, provides a scholarship for the assistance of meritorious young women engaged in the study of Household Science for use in missionary work. Awarded in 1919-1924 to Miss M. A. Caldwell.
- V. The Rowell Scholarships, one of \$30 and one of \$20, the gift of the Hon. N. W. Rowell, K.C., LL.D., and Mrs. Rowell, open to all students of Victoria College, will be awarded annually to the students ranking first and second in Church History.  
Awarded in 1921 to J. E. R. Doxsee and J. G. Endicott; 1922, P. W. Hone and S. J. Mathers; 1923, R. S. Mills and Miss F. A. Anderson; 1924, A. J. Smale and Miss R. W. Haines.
- V. The Hamilton Fisk Biggar Scholarships, of the value of \$50 each, awarded on the results of the May examinations to the students standing first in the University in those courses, Pass or Honour, where no prizes or scholarships are now offered. Preference will be given to the students of the third year.  
Awarded in 1921 to S. N. F. Chant, Miss M. E. Craig, Miss M. B. R. Fawcett, R. E. Gosse, H. W. Hilborn, Miss H. G. McKay and C. C. Oke, 1922, H. N. Couch, E. S. Evans, H. W. Hilborn, Miss G. H. McKay, C. C. Oke, R. F. Trewin, and F. G. Ward, 1923, Miss M. E. H. Adams, Miss S. H. Hughson, Miss I. F. Irwin, J. A. Irving, Miss E. A. Jerome, and R. F. Trewin; 1924, Miss M. E. H. Adams, Miss M. E. Balkwill, C. E. J. Cragg, E. M. Gundy, H. B. Hendershot, Miss S. M. Hughson, J. A. Irving, Miss K. J. Lamont, and Miss M. G. Stinson.
- V. The Meacham Scholarship, the interest on an endowment of \$3,600, the gift of the late Rev. George M. Meacham, to be awarded to a student enrolled in Arts and Theology who has announced his intention

- to proceed to the foreign mission field; the choice to be made by the combined faculties of Arts and Theology.
- V. The Lincoln G. Hutton Scholarship, of the value of \$100, the gift of the late Mr. and Mrs. F. Hutton in memory of their son Lieutenant Lincoln G. Hutton, who fell in action in France on December 18th, 1916. Awarded in 1921 to F. G. Ward; 1922, J. G. Endicott; 1923, Miss D. E. Toye; 1924, Miss M. M. Hutcheson.
- T. The late Ven. Archdeacon Nelles, of Biantford, left \$2,000 to Trinity College to be used for the assistance of students in Arts or Theology during their course in the College. Loans will be made from this fund, to be repaid by the students after the completion of their College course. There are also other funds from which similar loans will be made.

### UNDERGRADUATE AND GRADUATE

#### U. THE ALL SOULS' HISTORICAL ESSAY PRIZE

1. The Prize shall be called The All Souls' Historical Essay Prize.
2. It shall be of the value of one hundred and fifty dollars.
3. It shall be open to all undergraduate members of the University of Toronto, and to graduates who at the time of the awarding of the prize shall not have exceeded one year from the time of graduation.
4. It shall be awarded in every second year, beginning in 1910, and the subject shall be announced two years before the time of the award.
5. There shall be a choice of two subjects for the Essay—one to be taken from Ancient European History, and one from Mediæval or Modern History.
6. The choice of subjects and the awarding of the prize shall be in the hands of an examining board—to consist of the President of the University of Toronto, the Professor of History in the University, and the Professor of Ancient History in University College, should any of these be unable to act, the remaining members of the Board shall be empowered to name a substitute.
7. The Essay shall involve research work of an original nature, and no particular books or courses shall be prescribed.
8. If the examiners judge any essay to be worthy, it shall be published at the expense of the University.
9. The examining board shall have power to prescribe limits as to the length of the essay, and to draw up additional regulations for the administration of the prize, provided always that sections 3, 5 and 7 of these regulations remain unchanged.
10. If no essay of sufficient merit be forthcoming it shall be in the power of the examiners to withhold the prize for that term, and to recommend that the money be devoted to whatever purpose they judge most fit to encourage historical research.

Essays must be sent to the Registrar of the University on or before April 1, 1926; they must be accompanied by a motto or pseudonym, and by another and separate envelope containing the name of the

candidate, the name of his college, and the month and year of his matriculation. Candidates are advised to have their essays typed, and to confine them to (approximately) 30,000 words.

The subject for 1926 is.—*Thucydides' Interpretation of History or Carlyle as an Historian*

Awarded in 1912 to G. L. B. Mackenzie (*ob*), 1914, W. F. Wallace; 1918, Miss M. G. Reid.

#### U. THE JARDINE MEMORIAL PRIZE FOR ENGLISH VERSE

1. This prize, of the value of \$100, shall be open to any regular undergraduate student who has been in actual attendance at the University during the academic year preceding the date of submission (November 1) or who graduated in the previous academic year

2. The subject and metre of the poem shall be left to the choice of the competitor.

3. It is suggested that the length of the poem should be not less than 100 or more than 300 lines.

4. The poems shall be in the hands of the Registrar of the University by November 1st.

5. Each poem shall be signed with a pseudonym and the competitor's name shall be submitted to the Registrar in a sealed envelope on which the pseudonym shall be written.

6. With his or her name the competitor shall enclose a signed statement that the poem is absolutely his or her original work.

7. The competition shall be judged by a board of five examiners, consisting of the head of the Department of English in each of the four colleges, and of a fifth examiner to be chosen by these four.

8. The examiners shall have the power to withhold the award in any year if no poem which has been submitted for that year be found worthy of the prize

Awarded in 1921 to E. W. McInnis, 1922 and 1923, no award; 1924, R. D. C. Finch.

#### U. THE RAMSAY SCHOLARSHIP IN POLITICAL ECONOMY

This scholarship, of the value of \$60, is the gift of the late Mr William Ramsay of Bowland, Scotland, and is open for competition to all graduates or undergraduates who have been placed in the first class in one of the Economic subjects of the Fourth Year in the honour department of Political Science, but not more than two years must have elapsed since the competitor passed the examination above specified. The award is made upon an essay, the subject of which must be some question in Economics or Finance, of interest to the commercial community in Canada, to be announced in May of each year and the competition closes on the 15th of September thereafter, by which date the essays must be in the hands of the Registrar of the University.

1925. Canada and the Gold Standard.

Authorities must be carefully stated in every case.

No award in 1921, 1922, 1923 and in 1924

- U. THE GEORGE PAXTON YOUNG MEMORIAL FELLOWSHIP IN PHILOSOPHY  
This fellowship, of the value of \$300, will be awarded in June, 1925. The holder must be a Bachelor of Arts who has taken an honour course in Philosophy. This scholarship is tenable for one year, and the holder must devote his whole time to the study of some topic falling under the general term Philosophy. He may pursue his studies either in the University of Toronto, or in some other University approved by the Council of the Faculty, but in either case he shall furnish to the Council of the Faculty such evidence as may from time to time be required that he is faithfully observing the conditions under which the scholarship was awarded. Applications must be in the hands of the Registrar on or before June 15th, 1925. Further particulars may be obtained from the Registrar.

Those who have held the Young Fellowship are —1897, M. A. Shaw, B.A., Ph.D., 1899, G. J. Blewett, B.A., Ph.D. (*ob.*), 1899, R. J. Richardson, B.A. (*ob.*), 1901, F. S. Wrinch, B.A., Ph.D.; 1903, Miss M. A. Downing, B.A., 1905, J. I. Hughes, B.A., 1907, W. T. Brown, B.A., Ph.D., 1911, J. R. Sanderson, M.A., Ph.D.; 1913, E. A. Bott, B.A., 1915, C. A. Gowans, B.A.; 1917, no award, 1919, L. C. Harvey, B.A.; 1921, no award, 1923, S. J. Matheis, B.A.

- U THE MARION DICKENSON SCHOLARSHIP IN HOUSEHOLD SCIENCE

1 This Scholarship, which has been founded from a bequest of the late Miss Marion Dickenson, shall be called the Marion Dickenson Scholarship, and is of the annual value of \$200

2. The Scholarship shall be awarded either to an undergraduate of the University of Toronto, or to a graduate student who holds a Degree from this University

3 The scholar shall undertake studies in Household Economics in Teachers College, Columbia University, New York, within three years after the award is made, but the Scholarship shall not be paid until after the scholar shall have regularly entered upon the course in Columbia University

4. A candidate for the Scholarship shall have obtained First Class Honour standing in Household Science at least in her term work on graduation

5. A candidate who proposes to enter upon an academic career shall have preference.

6 In the event of an award not being made in any year the Scholarship may in exceptional cases be granted for the second year to a previous holder

7 The award shall be made by the Council of the Faculty of Arts on the recommendation of the President and the heads of the Departments of Household Science and Food Chemistry in the Faculty of Household Science.

These conditions are subject to change by the Senate and the Board of Governors

Awarded in 1921 to Miss E. H. Pridham, 1922, Miss C. Valentine (re-signed), 1923, Miss P. A. Robertson; 1924, Miss M. B. R. Fawcett.

#### U. TUTORIAL FELLOWSHIPS

Tutorial Fellowships in Mathematics, Chemistry and Biology, are awarded annually. The selection is made from among graduates of the University. Each Fellow is appointed annually; but he may be reappointed for a period not exceeding, in all, three years.

Each Fellow is required to assist in the teaching and practical work of his department, under the direction of the professor or lecturer. The Fellows are selected with a special view to their aptitude for teaching and their attainments in the department in which the appointment is to be made. Every Fellow on accepting his appointment comes under an obligation to fulfil the duties of his Fellowship during the academic year in which he is appointed, unless specially exempted.

In the Departments of Psychology, Physics, Biology, Physiology, Chemistry and Mineralogy a number of Assistant Demonstrators and Class Assistants are appointed annually, whose appointments are made subject to the same conditions as those governing the Tutorial Fellowships. The annual remuneration attached to these positions varies according to the extent of the duties assigned to the appointees.

Candidates for the Fellowships must send their applications annually to the Registrar, not later than the first day of June.

#### THE 1851 EXHIBITION SCIENCE RESEARCH SCHOLARSHIP

The Royal Commissioners for the Exhibition of 1851, if satisfied with the qualifications of the candidates put forward, will each year allot three Science Research Scholarships to Canada. The University of Toronto has been invited to recommend annually one or more candidates in order of merit for these Scholarships.

1. Each candidate recommended must be a British subject and under twenty-six years of age, except under very special circumstances; he must be a bona-fide student of Science of not less than three years' standing, he must also have completed a full University course and have spent at least one full academic year at this University prior to the date of recommendation.

2. The record of a candidate's work must indicate high promise of capacity for advancing science or its applications by original research.

Evidence of this capacity, which is the main qualification for the Scholarship, is strictly required. The most suitable evidence is a satisfactory account by the candidate of Research work already performed, and the Commissioners will decline to consider the claims of a candidate unless such an account is furnished, or unless there is other equally distinct evidence that he possesses this qualification.

3. Applications for these Scholarships must be made to the Registrar of the University not later than April 15th; the latest date on which the recommendation of the University of Toronto for Scholarships offered in 1926 can be received at the Office of the Commissioners is June 1st, 1926.

4. Each Scholarship is of the value of £250 per annum, payable quarterly in advance, on presenting to the Commissioners a satisfactory final report at the expiration of his Scholarship the scholar will receive a grant of £25. A scholar who is not in a position to travel at his own expense, or for whom it is not possible to obtain free passage, may make application to the Commissioners for aid towards the payment of his fare from his home to his place of study. A Scholar will receive an additional annual allowance, not exceeding £30 towards the cost of University fees, if, in the opinion of the Commissioners, he is in need of such allowance.

5 The Scholarship will be tenable ordinarily for two years, and in cases of exceptional merit for three years. The continuation of a Scholarship for a second year will depend upon the satisfactory nature of the scholar's first year's work. Renewal for a third year will be granted only where it appears that the renewal is likely to result in work of scientific importance.

6 The scholar will be required to devote himself to research in some branch of pure or applied science, the particular nature of the work proposed to be approved by the Commissioners.

7 A scholarship may be held, with the approval of the Commissioners, at any Institution in the United Kingdom or abroad, but a scholar will not be permitted, except under very special circumstances, to conduct his investigations in the country in which he has received his scientific education.

8. Scholars will be required to furnish reports of their work at the end of each year of tenure of their scholarships.

9. Scholars will be required to devote their whole time to the objects of the scholarship, and will be forbidden to hold any position of emolument which carries with it a duty inconsistent with their obligation to the Commissioners. Scholars must in any case obtain the consent of the Commissioners before accepting any additional emoluments.

10. In case of misconduct on the part of a scholar the Commissioners may, at their absolute discretion, deprive him of his scholarship and all emoluments therefrom.



The regulations adopted by the Senate are as follows:—

The departments, students of which shall be eligible to be candidates, are:—1. Bacteriology, 2. Biochemistry; 3. Botany; 4. Chemistry; 5. Engineering (chemical); 6. Engineering (civil); 7. Engineering (electrical); 8. Engineering (mechanical); 9. Engineering (metallurgical); 10. Engineering (mining); 11. Forestry, 12. Geology; 13. Mineralogy; 14. Physics; 15. Physiology; 16. Zoology.

A student shall not be deemed to be ineligible because of his being on the teaching staff of the University, if he has not been in receipt of a salary of more than \$800 per annum and has not been on the teaching staff for more than two years from graduation

A student shall be deemed to be eligible in the year in which he intends to graduate, but if nominated for the Scholarship his nomination shall be subject to his being successful in passing his examination for his degree.

The nomination of the candidate or candidates shall be made by a Board composed of seven members appointed by the Senate, and the Board shall consist of the Chancellor, the President, the Reverend Dr. Bowles, the Honourable Mr Justice Masten, the Honourable W. E. Raney, Dr J. A. Worrell and Dr. C. Morse, and the Board shall have power to call to its aid as assessor any member of the teaching staff

The 1851 Exhibition Science Research scholars—

F. J. Smale, B.A., Ph.D., 1892-93, 1893-94, 1894-95

F. B. Kenrick, M.A., Ph.D., 1894-95, 1895-96, 1896-97.

A. M. Scott, B.A., Ph.D., 1896-97, 1897-98.

W. G. Smeaton, B.A., Ph.D., 1898-99, 1899-1900.

J. Patterson, B.A., 1900-01, 1901-02.

W. C. Bray, B.A., 1902-03, 1903-04.

E. F. Burton, Ph.D., 1904-05, 1905-06.

R. H. Clark, M.A., 1906-07, 1907-08.

C. S. Wright, M.A., 1908-09, 1909-1910.

W. P. Thompson, B.A., 1910-11, 1911-12.

A. J. Dempster, M.A., 1912-13, 1913-14.

A. R. McLeod, M.A., 1914-15 (Bursary).

1916, 1918, 1919, no awards.

A. L. Marshall, M.A., 1920-21, 1921-22.

J. M. Luck, B.A., 1922-23, 1923-24, 1924-25.

W. L. Webster, B.A., 1923-24, 1924-25.

G. I. Hoover, B.A., 1924-1925.

#### THE McCHARLES PRIZE

This prize was established in connection with the bequest of the late Aeneas McCharles of Provincial Government bonds of the value of \$10,000, and is awarded on the following terms and conditions, namely, that the interest therefrom shall be given from time to time, but not necessarily

every year, like the Nobel prizes in a small way: (1) To any Canadian from one end of the country to the other, and whether student or not, who invents or discovers any new and improved process for the treatment of Canadian ores or minerals of any kind, after such process has been proved to be of special merit on a practical scale; (2) Or for any important discovery, invention or device by any Canadian that will lessen the dangers and loss of life in connection with the use of electricity in supplying power and light, (3) Or for any marked public distinction achieved by any Canadian in scientific research in any useful practical line. The following conditions, as passed by the Board of Governors, determine the method of award —

(1) The title shall be the McCharles Prize.

(2) The value of the prize shall be One Thousand Dollars (\$1,000.00) in money.

(3) The term "Canadian" for the purpose of this award shall mean any person Canadian born who has not renounced British alliance; and for the purpose of the award in the first of the three cases provided for by the bequest, domicile in Canada shall be an essential condition.

(4) Every candidate for the prize shall be proposed as such in writing by some duly qualified person. A direct application for a prize shall not be considered.

(5) No prize shall be awarded to any discovery or invention unless the same shall have been proved to the satisfaction of the awarding body, to possess the special practical merit indicated by the terms of the bequest.

(6) The order of priority in which the three cases stand in the wording of the bequest shall be observed in making the award; that is, the award shall go *caeteris paribus* to the inventor of methods of smelting Canadian ores, and, failing such inventions, to the inventor of methods for lessening the dangers attendant upon the use of electricity; and only in the third event, if no inventors of sufficient merit in the field of metallurgy and electricity present themselves, to the inventor distinguished in the general field of useful scientific research.

(7) The first award was made in 1910

(8) The composition of the awarding body shall be as follows:—

An expert in Mineralogy,

An expert in Electricity,

An expert in Physics,

and four other persons. All of the members of this body shall be nominated by the Board of Governors of the University of Toronto.

#### THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIPS

Three scholarships, each of the value of \$200, have been established by the Alumni Federation of the University from the War Memorial Fund to be awarded to students in the Faculty of Arts

Three Gordon Southam Scholarships, each of the value of \$200, one to be awarded at the end of each of the first three years, have also been established, the gift of the Southam family in memory of Gordon Hamilton Southam, B.A. '07, University College, Major Commanding 40th Battery, C.F.A., killed in action October 15th, 1916. These Scholarships are open for competition to students of University College only.

The general basis on which the above scholarships may be awarded is as follows.

(a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918.

(b) Standing in course of studies.

(c) Need of assistance.

(d) Such other general qualifications of merit as may commend themselves to the Committee.

Information regarding these scholarships may be obtained from the Secretary-Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made

#### THE JOHN H. MOSS MEMORIAL FUND

The John H. Moss Memorial Fund, the gift of friends of the late John H. Moss, B.A., K.C., is intended to provide the annual sum of \$300 to be awarded under the following regulations:

The graduating class in Arts in each of University College, Victoria College, Trinity College and St. Michael's College, shall select by vote the student whom they regard as the best all-round man or woman in the final year, giving preference during the first ten years to former members of the Canadian Expeditionary Forces, or failing them, to children, brothers or sisters of such former members, or of Canadian officers or men who served at home during the war. Nominations must reach the Secretary of the Alumni Federation of the University of Toronto not later than March 1st.

The award shall be made to one of the four students so selected, by a Committee of Award consisting of the President of the University, the President of the Alumni Federation and three of its members.

Awarded in 1921 to H. D. Brown, Victoria College, and P. A. Child, Trinity College, (*aeq.*), 1922, F. L. Hutchison, University College; 1923, J. G. Endicott, Victoria College, and Miss M. A. Pickford, Trinity College (additional grant); 1924, M. C. O'Neill, St. Michael's College, by reversion to Miss A. M. Hilliard, Victoria College.

## THE RHODES SCHOLARSHIP

The trustees of the late Mr. C. J. Rhodes have assigned one of the Rhodes Scholarships to the Province of Ontario

This scholarship will hereafter be thrown into open competition in the Province, subject to the following conditions:—

1. Candidates must be British subjects, with at least five years' domicile in Canada, and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

2. Candidates must be at least in their Sophomore Year at some recognized degree-granting University or College of Canada, and (if elected) complete the work of that year before coming into residence at Oxford.

3. Candidates may compete either in the Province in which they have acquired any considerable part of their educational qualification, or in the Province in which they have their ordinary private domicile, home or residence.

In each Province there is a Committee of Selection, appointed by the Trustees, in whose hands the nomination will rest. The Secretary of the Committee of Selection for Ontario is Norman S. Macdonnell, Esq., Barrister, Sun Life Building, Toronto.

The Committees of Selection are instructed to bear in mind the suggestions of Mr. Rhodes, who wished that, in the choice of his Scholars, regard should be had to

(a) Force of character, devotion to duty, courage, sympathy, capacity for leadership.

(b) Ability and scholastic attainments

(c) Physical vigor, as shown by participation in games or in other ways.

Every candidate for a Scholarship is required to furnish to the Committee of Selection for his Province the following:—

(a) A certificate of age.

(b) A photograph preferably unmounted and not larger than 4×7 inches.

(c) A written statement from the President or Acting President of his College or University to the effect that his application as a suitable candidate is approved.

(d) Certified evidence as to the courses of study pursued by the Scholar at his University, and as to his gradings in those courses. This evidence should be signed by the Registrar, or other responsible official, of his University.

(e) A brief statement by himself of his athletic and general activities and interests at College, and of his proposed line of study at Oxford.

(f) Not more than four testimonials from persons well acquainted with him.

(g) References to four other responsible persons, whose addresses must be given in full, and of whom two at least must be professors under whom he has studied.

It is in the power of the Committee of Selection to summon to a personal interview such of the candidates as they find desirable to see, and, save under exceptional circumstances, no Scholar will be elected without such an interview. Where such an interview is dispensed with, a written statement of the reasons will be submitted to the Trustees.

The next appointment will be made for 1926, applications for this Scholarship with all required material must reach the Secretary of the Committee of Selection not later than October 20th, 1925.

The Scholarship is of the value of £300 a year, and is tenable for three years, subject to the continued approval of the College at Oxford of which the Scholar is a member. In addition a scholar will receive, until further notice, an annual bonus of £50

The Scholar-elect will come into residence in October of the year for which he is elected.

Students who have obtained the B. A. degree at the University of Toronto, provided that they have resided three years at this University, may apply for "Senior Standing" at Oxford, exempting them from all preliminary and intermediate examinations, and making it possible for them to take their Final Honour Schools, and B. A. degree, in two years.

Students who have resided two years at a Canadian University, and passed the examinations incident to a two years' course, may apply for Junior Standing at Oxford, which carries with it exemption from Respon-sions, but not from the intermediate examination. They can proceed to their B.A. degree in two years, provided that they obtain Honours either in Moderations or in the Final Honour Schools.

Greek is no longer an obligatory subject at Oxford.

It must be realized that £350, the value of Scholarship plus bonus, will barely meet the expenses of a full year, including vacations. Scholars will probably find it necessary to supplement their Scholarships slightly.

The Rhodes Scholars elected by this University previous to 1919 are as follows—

1904. E. R. Paterson, University College. (*ob.*)

1906: R. C. Reade, University College.

1908: W. K. Fraser, University College.

1910: A. L. Burt, Victoria College.

1913: C. H. Carruthers, University College.

1915: A. K. Griffin, Trinity College

The following Rhodes Scholars, students of this University, have been nominated by the Committee of Selection for Ontario and duly appointed by the Rhodes Trust:—

1919: M. D. C. Tait, University College.

1920: J. R. Stirrett, University College.

1921: J. Lowe, Trinity College.

1923: N. J. Endicott, Victoria College.

1924: L. A. MacKay, University College.

## THE EDWARD KYLIE AWARD

A permanent foundation known as the "Edward Kylie Trust" was established in 1921 by friends of the late Edward J. Kylie, M.A., of the Department of Modern History, as a memorial to him. The income from this fund is used by the Trustees for the purpose of making an award from time to time to a student in the Modern History Course to enable him to pursue his studies in Great Britain.

Applications should be addressed "The Secretary, The Edward Kylie Trust," and forwarded, before the first of May in each year, through the Registrar of the University, from whom further information can be secured.

\*Awarded in 1921 to F. H. Soward; 1922, 1923 and 1924, no award.

## DAUGHTERS OF THE EMPIRE OVERSEAS SCHOLARSHIP

As part of their War Memorial, the Imperial Order Daughters of the Empire offer each province of Canada a scholarship for post-graduate study in Britain. A present a scholarship is offered in each province once in two years; it will be next awarded to an Ontario candidate in 1926, for study during the academic year of 1927-1928. The value of the scholarship is \$1,400, for one year.

These scholarships are subject to the following conditions:

(1) Candidates may be men or women. They must be British subjects, with at least five years' residence in Canada, and unmarried. Except in the case of a returned soldier, sailor or airman, he must have passed his 19th but not his 27th birthday in October of the year in which he begins his work in Britain. Each candidate must either hold a degree from a University or College in the province in which he or she is making application, or be in his or her final year in a course proceeding to a degree.

(2) In each province a committee of selection will award the scholarship. Other things being equal, preference will be given to a returned man, his sister, son or daughter. The committee will consider not only the academic record of the candidate, but his or her character, physical fitness, and promise.

(3) Applications for this scholarship should be sent before October 1926 to the Provincial Educational Secretary, I.O.D.E., Y.W.C.A. Building, Hamilton, Ontario, who will provide additional information about the scholarship.

## FEDERATION SCHOLARSHIP

The Scholarship of the Canadian Federation of University Women, of the value of \$1,000, available for study or research work, is open to any woman holding a degree from a Canadian University. In general, preference will be given to those candidates who have completed at least one or two years at graduate study and have a definite research in view. The award is based on evidence of character and ability of the candidate and promise of success in the subject to which she is devoting herself.

The choice of the University at which the successful candidate shall pursue her study or research work is left to the Committee of Selection in consultation with the candidate.

There are no application blanks and application is made by letter to the Convener of the Scholarship Committee, Mrs. Douglas J. Thom, 2220 16th Ave., Regina, Sask., from whom further information may be obtained.

Applications and recommendations must be received not later than February 1st. None can be accepted after that date.

## COURSES OF INSTRUCTION

The members of the staff indicated under the headings "The Classics", etc., in the following pages, are those of the Session 1924-1925.

## THE CLASSICS

## UNIVERSITY COLLEGE:

M. HUTTON, M.A., LL.D.	Professor of Greek
J. MACNAUGHTON, M.A., LL.D.	Professor of Latin
A. CARRUTHERS, M.A.	Professor Emeritus
W. S. MILNER, M.A.	Professor of Greek and Roman History
G. O. SMITH, M.A.	Associate Professor of Latin
C. N. COCHRANE, M.A.	Associate Professor of Ancient History
E. A. DALE, M.A.	Associate Professor of Latin
E. T. OWEN, M.A.	Associate Professor of Greek
D. E. HAMILTON, M.A., D.PAED.	Associate Professor of Greek
A. G. BROWN, M.A.	Assistant Professor of Ancient History
D. DUFF, M.A., B.D.	Assistant Professor of Latin
MISS E. HARRIS, M.A.	Lecturer in Latin

## VICTORIA COLLEGE.

A. J. BELL, M.A., PH.D.	Professor Emeritus
J. C. ROBERTSON, M.A.	Professor of Greek
N. W. DEWITT, B.A., PH.D.	Professor of Latin
C. B. SISSONS, B.A., LL.D.	Professor of Ancient History
H. G. ROBERTSON, B.A., PH.D.	Lecturer
L. A. MACKAY, M.A.	Fellow in Latin

## TRINITY COLLEGE:

REV. H. T. F. DUCKWORTH, M.A.	Professor of Ancient History
W. A. KIRKWOOD, M.A., PH.D.	Professor of Latin
J. N. WOODCOCK, M.A.	Professor of Latin
S. M. ADAMS, M.A.	Associate Professor of Greek
R. E. K. PEMBERTON, M.A.	Lecturer

## ST MICHAEL'S COLLEGE:

REV. H. CARR, B.A., LL.D.	Professor of Greek
REV. R. McBRADY	Professor of Latin
REV. J. B. WALSH, M.A.	Associate Professor of Latin
M. ESTELLE, M.A.	Lecturer in Latin
M. ST. JOHN, M.A.	Lecturer in Latin



N.B.—The following books are recommended for the use of all students taking work in the Classical Department: Dictionaries: Greek—LIDDELL AND SCOTT, *Greek-English Lexicon* (unabridged or intermediate size), Latin—LEWIS AND SHORT, *A Latin Dictionary* (unabridged or intermediate size); Grammars. Greek—GOODWIN or SMYTH, *Greek Grammar*; Latin—ALLEN AND GREENOUGH or GILDERSLEEVE AND LODGE, *Latin Grammar*, Histories of Literature: Greek—GILBERT MURRAY or WRIGHT; Latin—MACKAIL, *Latin Literature*; Atlases. MURRAY, *Classical Atlas* or *The Atlas of Ancient and Classical Geography* in Everyman's Library.

## GREEK

### PASS COURSES

1a. Translation at sight of easy narrative prose; Greek Grammar (including sentences to test accidence and syntax); NORTH AND HILLARD, *Greek Prose Composition*, Exercises A, pages 1-85; BELL, *Second Greek Reader*. Four hours a week.

1b. HILLARD AND BOTTING, *Elementary Greek Translation Book*. Four hours a week.

(This course may be taken only by those specially recommended by their College, and the course must be continued through all four years.)

2a. Translation at sight of easy passages of Greek; Greek Grammar; translation from English into Greek of sentences based on NORTH AND HILLARD, *Greek Prose Composition*, pages 1-155 inclusive; EURIPIDES, *Medea*, THUCYDIDES, I. Chap., 89-117, 128-138 both inclusive. Three hours a week.

2b. EDWARDS, *Salamis*; FREEMAN AND LOWE, *Greek Reader*; Translation at sight. Three hours a week. (This course is for those who have completed 1b.)

3a. PURVES, *Selections from Plato* (approximately sixty pages), Translation at sight. To be read in English. additional prescribed portions of Plato, THUCYDIDES, *Pericles' Funeral Speech*; DEMOSTHENES, *Philippic I*. DICKINSON, *Greek View of Life*; GRANT, *Age of Pericles*. Three hours a week.

4a. HOMER, *Iliad* I., 1-350, VI., 237 to end, XXII.; *Odyssey*, VI. and IX.; SOPHOCLES, *Oedipus Rex*; Translation at sight. To be read in English: SOPHOCLES, *Antigone* (tr. Yonge); EURIPIDES (tr. Murray), *Medea*; ARISTOPHANES (tr. Rogers), *Birds*, LIVINGSTONE, *Greek Genius*; JEBB, *Classical Greek Poetry*, *The Legacy of Greece*. Three hours a week.

### HONOUR COURSES

1c. *Classics*: Grammar; translation at sight; prose composition; HOMER, *Iliad* XXII and XXIV, with additional translation of Homer at sight; EURIPIDES, *Iphigenia in Tauris*; PLATO, *Apology*; THUCYDIDES, I, 89-117, 128-138; DEMOSTHENES, *Philippic I*, *Olympiacs* I, III. Five hours a week.

1d. *English and History*: The same as 1c, omitting DEMOSTHENES. Four hours a week.

1e. *French, Greek and Latin*: The same as 1c, omitting THUCYDIDES. Four and a half hours a week.

1f. *Philosophy, (English or History Option)*: prose composition, PLATO and THUCYDIDES, as in 1c. Four hours a week.

2c. *Classics*: Grammar, translation at sight; prose composition; ARISTOPHANES, *Birds, Clouds*; THEOCRITUS, *Idylls* I, II, VII, XV; PLATO, *Chilo, Laches*; THUCYDIDES IV, 1-41, 58-65, 76-108, with additional translation from Thucydides and Plato at sight, JEBB, *Classical Greek Poetry*. Five hours a week.

2d. *English and History*: The same as 2c, omitting Greek Grammar, THUCYDIDES, IV, 76-108, and PLATO, *Laches*. Four hours a week.

2e. *French, Greek and Latin*: The same as 2c, omitting THUCYDIDES, IV, 76-108, and PLATO, *Laches*. Four hours and a half a week.

2f. *Hellenistic Greek*: CONYBEARE AND STOCK, *Selections from the Septuagint*. One hour a week.

3b. *Classics*: Grammar, translation at sight, prose composition; HERODOTUS, VII, VIII, IX; THUCYDIDES, I, II, SOPHOCLES, *Œdipus Rex, Electra*, PLATO, *Republic* I-IV, ARISTOTLE, *Ethics* I-IV, X (8-9); ancient philosophy including (a) Greek speculative theories before Socrates, (b) Socrates and his contemporaries, (c) the doctrines of Plato and Aristotle. an elementary course with special reference to the prescribed texts, and in addition to the Greek texts here prescribed the student should read GROTE, *History of Greece*, Chapters LXVII and LXVIII, and CUSHMAN, *Beginner's History of Philosophy*, or ROGERS, *Student's History of Philosophy*. Seven hours a week.

3c. *English and History*: PLATO, as in 3b. Two hours a week.

3d. *English and History (Special Option)*: ARISTOTLE, as in 3b. One hour a week.

3e. *Greek and Hebrew*. PLATO, ARISTOTLE, and History of Greek Philosophy, as in 3b. Four hours a week.

3f. *French, Greek and Latin*: The same as 3b, omitting HERODOTUS. Six hours a week.

3g. *Hellenistic Greek*; Grammar and Philology, *I Maccabees, The Wisdom of Solomon*, Selections from LUCIAN. One hour a week.

3h. Essays on prescribed topics.

4b. *Classics* Historical grammar of Greek and Latin; translation at sight; prose composition; THUCYDIDES, III, IV, V (84-122), VI, VII; PLATO, *Republic*; ARISTOTLE, *Politics* (selections), *Poetics* (with the history of the Greek genius and Greek poetry); AESCHYLUS, *Agamemnon*; EURIPIDES, *Iphigenia in Tauris*. Seven hours a week.

4c. *English and History* ARISTOTLE, *Poetics* (in translation) One hour a week.

4d. *English and History (Special Option)*: PLATO, *Republic* as in 4b. One hour a week.

4e. *Greek and Hebrew*: PLATO, *Republic*; History of Philosophy with special reference to Philo, Neo-Platonism, and the Stoicism of the Empire. Three hours a week

4f. *French, Greek and Latin*. The same as 4b, omitting THUCYDIDES. Six hours a week

4g. Hellenistic Greek: Grammar and Philology, ARISTAEUS; Selections from Patristic Literature. Two hours a week.

4h. A course of reading to be approved by the Department, with essays on prescribed topics.

## LATIN

### PASS COURSES

1a. Translation at sight of Latin similar to the prescribed Cicero; translation into Latin of sentences based on the prescribed Cicero, translation of passages from the prescribed Horace; questions on grammar and prosody, and on the subject-matter of the prescribed texts; CICERO, *In Catilinam* I, III; HORACE, selected *Odes*. Four hours a week.

1b. The same as 1d. Four hours a week.

2a. Translation at sight of Latin similar to the prescribed Livy; translation into Latin of sentences to illustrate Latin syntax, translation into Latin of simple narrative based on the prescribed Livy; translation of passages from the prescribed Catullus; questions on grammar and prosody and on the subject-matter of the prescribed texts; LIVY, Selections from Books XXI-XXX (Egbert, sixty pages), CATULLUS (Simpson). Three hours a week.

3a. *Course for 1925-1926*: Grammar; translation at sight, prose composition; TACITUS, *Agricola*; HORACE, *Epistles* I, omitting 17 and 18, JUVENAL, *Satires* I, III, X; PLINY, *The Death of the Elder Pliny*, *The Eruption of Vesuvius*, *The Christians*, *Trajan's Reply on the Christians*; BAILEY, *The Legacy of Rome*. Three hours a week.

3a. *Course for 1926-1927*: Grammar; translation at sight; prose composition; CICERO, *Pro Archia*; VIRGIL, *Eclogues* I, IV, VI, VIII, *Aeneid* VI; PLINY, selected *Letters* (Prichard and Bernard); MACKAIL, *History of Latin Literature*. Three hours a week.

4a. Same as 3a. Three hours a week.

NOTE 1. Students of the Fourth Year who have not passed in the Latin of their Third Year will be required at the B.A. examination of 1924 to take an additional paper on the work of the alternative course.

NOTE 2. Students of the Fourth Year who, through absence from the University, have not taken the two Latin courses in consecutive years will, at their Final Examination, be required to take the paper on the authors prescribed in 3a which they did not take in their Third Year.

### HONOUR COURSES

\* 1c. *Classics*. Grammar, including prosody; translation at sight; prose composition; CATULLUS (Simpson); VIRGIL, *Georgics* I, IV; HORACE, *Odes* (selected); CICERO, *Philippic* II, *De Senectute*, with additional translation of Cicero at sight. Four to five hours a week.

1d. *English and History*. The same as 1c, omitting VIRGIL, *Georgics* I, and CICERO, *Philippic* II. Four hours a week.

1e. *French, Greek and Latin*. The same as 1c, omitting VIRGIL, *Georgics* I. Four hours and a half a week.

2b. *Classics*: Grammar, translation at sight; prose composition, PLAUTUS, *Rudens*, TERENCE, *Andria*, VIRGIL, *Aeneid* I-VI; LIVY, XXI; with additional translation from Livy at sight; TACITUS, *Agricola*, MACKAIL, *History of Latin Literature*. Five to six hours a week.

2c. *English and History*: The same as 2b, omitting Latin Grammar, VIRGIL, *Aeneid* I-III, and LIVY. Three hours a week.

2d. *French, Greek and Latin*: The same as 2b. Four hours and a half a week.

3b. *Classics*: Grammar, translation at sight, prose composition; CICERO, *Letters* (Books I and II of Watson's selections); CAESAR, *Civil War* I; SALLUST, *Catiline*, VIRGIL, *Aeneid* VII-XII; HORACE, *Epistles* (selected), *Satires* (selected), LUCRETIUS V and selections from I. Six hours a week.

3c. *English and History*. HORACE and LUCRETIUS as in 3b. Two hours a week.

3d. *English and History* (special option): CICERO, CAESAR and SALLUST as in 3b. One hour a week.

3e. *French, Greek and Latin*. The same as 3b, omitting CICERO. Five hours a week.

3f. Essays on prescribed topics.

4b. *Classics*. Historical grammar of Greek and Latin; translation at sight; prose composition; CICERO, *Letters* (Books III-V of Watson's selections), CAESAR, *Civil War*; HORACE, *Ars poetica*; QUINTILIAN X, TACITUS, *Annals* I-VI, JUVENAL, *Satires* I, III, V, X; MARTIAL (selections), history of post-Aristotelian philosophy. Five hours a week.

4c. *English and History*. CICERO and CAESAR as in 4b. Two hours a week.

4d. *French, Greek and Latin*. The same as 4b, omitting historical grammar and CICERO, and adding BROWNRIGG, *Latin Prose of the Silver Age* (selections), LUCAN, Book VIII, SENECA, *Hercules Furens*.

4e. A course of reading to be approved by the Department, with essays on prescribed topics.

## GREEK AND ROMAN HISTORY

### PASS AND HONOUR COURSE

1. General History of Greece to 146 B.C. General History of Rome to A.D. 476. GOODSPEED, *History of the Ancient World*; BURY, *Student's History of Greece* (Kimball); PELHAM, *Outlines of Roman History*. The course aims at a simple outline of the general historical movement in the Græco-Roman world and at an appreciation of the most characteristic features of Mediterranean civilization.

### PASS COURSES

2a. A more mature study of Greek History based on Herodotus, Thucydides and Plutarch.

3a. Criticism of the City state, the Greek philosophers, Hellenism; the Roman Empire from the period of the Great Wars to the death of Caesar, and the influence of Greece on Rome.

4a. The Empire from Augustus to Justinian, Græco-Roman Civilization; Christianity in the Roman Empire.

### HONOUR COURSES

2b. The city-state of the Greeks and Romans.

3b. Greek History to 431 B.C.

3c. Roman History from 133 B.C. to 49 B.C.

4b. Greek History from 431 B.C. to 399 B.C.; general questions on Greek History.

4c. Roman History from 49 B.C. to 37 A.D.

4d. Roman Institutions: GREENIDGE, *Roman Public Life*; WARDE FOWLER, *The Religious Experience of the Roman People*, DELOUMÉ, *Les Monnaies d'argent à Rome*, SALVIOLI, *Capitalisme*.

## ORIENTAL LANGUAGES

### UNIVERSITY COLLEGE:

J. F. MCCURDY, PH.D., LL.D. .... *Professor Emeritus*.

W. R. TAYLOR, PH.D. .... *Professor*.

T. J. MEEK, B.A., B.D., PH.D. .... *Professor*.

W. A. IRWIN, M.A., D.B. .... *Assistant Professor*.

F. V. WINNETT, M.A. .... *Fellow*.

VICTORIA COLLEGE:

REV. J. F. McLAUGHLIN, B A., D D..	..	..	Professor
S H. HOOKE, M.A., B D	.....	.....	Professor.
REV. W A. POTTER, M.A., B D.	.....	.....	Associate Professor.

TRINITY COLLEGE:

REV. S. A. B. MERCER, M A., Ph.D., D D.	..	..	Professor.
REV W. ROLLO, M.A....	.....	.....	Lecturer.

PASS COURSES

1a A course in the history of the Hebrew people from the Exodus to 586 B.C.; a literary study of the books of Amos, Hosea, Isaiah and Micah. One hour a week.

1b. Hebrew Grammar; translation from Hebrew into English of Gen. 1-4, 18; Pss. 1, 8, 24; translation from English into Hebrew. Introduction to Oriental History. DAVIDSON, *Hebrew Grammar*; KITTEL, *Biblia Hebraica*; BREASTED, *Ancient Times*. Four hours a week

2a A course in the history of the Hebrew people from 586 to 4 B.C.; a study of the Prophetic, Legal and Historical Literature of the Old Testament. Two hours a week.

2b Hebrew Grammar with special attention to syntax; translation from English into Hebrew, translation into English of *Genesis* 37, 40-45; *Ex.* 3, 4, 15, *Judges* 13-18, *Ruth*; history of the Massoretic Text and the Versions; outlines of the geography of Palestine; the sources of Hebrew Literature. DAVIDSON, *Hebrew Grammar*; KITTEL, *Biblia Hebraica*; BROWN, DRIVER AND BRIGGS, *Lexicon*. Three hours a week

3a. A literary study of the Poetical books of the Old Testament and of the Synoptic Gospels Three hours a week.

3b. Translation from English into Hebrew; Hebrew history from the settlement in Canaan to the end of the Kingdom (586 B.C.). Translation into English of *Amos*; *Isaiah* 1-6, 40-45 and 52-55; *II Kings* 15-25, *Deuteronomy* 5-11; KITTEL, *Biblia Hebraica*; DAVIDSON, *Hebrew Grammar*; DAVIDSON, *Hebrew Syntax*; BROWN, DRIVER AND BRIGGS, *Lexicon*; G. W. WADE, *Old Testament History*; H. P. SMITH, *Old Testament History*. Three hours a week

4a A literary and historical study of Christianity and of its fore-runners Three hours a week

4b. Translation from English into Hebrew; characteristics of Hebrew poetry, Jewish history from the fall of Jerusalem 586 B.C. to the end of the Maccabean period. Translation into English of selected *Psalms*, 100, 95, 24, 15, 48, 87, 114, 81, 147, 148, 150, 46, 47, 93, 97, 8, 19, 29, 103, 104, 65, 67, 118, 21, 116, 30, 74, 89, 90, 20, 72, 42, 43, 22, 51, 137, 84, 122, 110, 107, 23, 78, 127, 133, 45; *Zechariah* 1-8; *Jonah*; *II Chronicles* 1-9; KITTEL, *Biblia Hebraica*; DAVIDSON, *Hebrew Syntax*; GESNIUS-KAUTZSCH, *Hebrew Grammar*; KENT, *History of the Jewish People*, Vols III and IV. Three hours a week.

## HONOUR COURSES

2c. *Orientalis, Greek and Hebrew*. Hebrew Grammar with special attention to syntax. Translation into English, the same as 2b. Hebrew prose exercises. DAVIDSON, *Hebrew Grammar*, DAVIDSON, *Hebrew Syntax*. Three hours a week.

2d. *Orientalis, Greek and Hebrew*. Translation into English of *Judges* 1-12, I Sam 9-19. Two hours a week.

2e. *Orientalis*. Translation into English of *Exodus* 5-12. 18-21. 34, 14-27; *Lev.* 8-10, *Deut.* 8-13, outlines of Hexateuchal Problems. Two hours a week.

2f. *Orientalis*. Aramaic Grammar with translation of extracts from Targums of Onkelos and from Daniel and Ezra; MARTI, *Biblisch-Armaeische Grammatik*. Introduction to Syriac Grammar. ROBINSON, *Syriac Grammar*. Two hours a week.

3c. *Orientalis, Greek and Hebrew*. Translation into English, the same as 3b. Three hours a week.

3d. *Orientalis, Greek and Hebrew*. Translation into English of selections from *Isaiah* 1-39. Two hours a week.

3e. *Orientalis*: Translation into English of selections from *Jeremiah*, *Ezekiel*, and the Minor Prophets. Two hours a week.

3f. *Orientalis*. Hebrew prose composition and sight translation. GESENIUS-KAUTZSCH, *Hebrew Grammar*. One hour a week.

3g. *Orientalis*: Arabic First Course; THATCHER, *Arabic Grammar* with exercises in translating easy prose into English. Two hours a week.

3h. *Orientalis*: Advanced course in Aramaic or Syriac. ROBINSON, *Syriac Grammar*; BROCKELMANN, *Syrische Grammatik*. Two hours a week.

3i. *Orientalis*: Elements of Assyrian; FR. DELITZSCH, *Assyrische Lesestücke*. Two hours a week.

4c. *Orientalis, Greek and Hebrew*: Translation into English, the same as 4b. Three hours a week.

4d. *Orientalis, Greek and Hebrew*. Translation into English of selections from *Job*, *Proverbs* and *Ecclesiastes*. One hour a week.

4e. *Orientalis*: Selections from Late Biblical or Post-Biblical Hebrew. One hour a week.

4f. *Orientalis*. Hebrew prose composition and sight translation. DAVIDSON, *Hebrew Syntax*. One hour a week.

4g. *Orientalis*: Arabic Second Course; THATCHER, *Arabic Grammar* (continued); BRÜNNOW, *Chrestomathy of Arabic Prose Selections*, HARDER, *Arabic Chrestomathy*. Two hours a week.

4h. *Orientalis*: Advanced course in Aramaic or Syriac; NOLDEKEEF, *Syriac Grammar*; *Selected Texts*. Two hours a week.

4i. *Orientalis*: Advanced course in Assyrian. Inscriptions of Sennacherib, Sargon, Ashurbanipal. Two hours a week.

## ANCIENT ORIENTAL HISTORY

## PASS COURSES

2a. History of Egypt, Babylonia, Assyria, Palestine and related lands down to 612 B.C. BREASTED, *Ancient Times*. Two hours a week

3a. History of the Near East, continuing 2a, from 612 B.C. to 63 B.C. Two hours a week.

4a. History of the Near East, from 63 B.C. to the present. Two hours a week

## HONOUR COURSES

2b. *Hebrew and Ancient History*: The same as 2a, together with a more intensive study of selected topics. Three hours a week.

2c. *Oriental, Greek and Hebrew*: History of the Western Orient until 745 B.C. H. R. HALL, *The Ancient History of the Near East* (revised edition). One hour a week.

3b. *Hebrew and Ancient History*: The same as 3a, together with a more intensive study of selected topics. Three hours a week.

3c. *Oriental, Greek and Hebrew*: History of the Western Orient from 745 B.C. to 330 B.C., with special attention to the history, literature and institutions of the Hebrews. One hour a week

4b. *Hebrew and Ancient History*: The same as 4a, together with a study of exploration and archaeology of the lands of the Near East. Three hours a week.

4c. *Oriental, Greek and Hebrew*: History of the Western Orient from 330 B.C. to 135 A.D., with special attention to the history and literature of the Jews, the history of Mohammed and the Caliphate. One hour a week

## ENGLISH

## UNIVERSITY COLLEGE.

W. J. ALEXANDER, PH.D., LL.D.	Professor.
D. R. KEYS, M.A.	Professor Emeritus.
M. W. WALLACE, B.A., PH.D.	Professor.
R. S. KNOX, M.A.	Associate Professor.
H. J. DAVIS, M.A.	Associate Professor.
W. H. CLAWSON, M.A., PH.D.	Associate Professor.
MRS. M. M. KIRKWOOD, PH.D.	Lecturer.
MISS G. E. WOOKEY, M.A.	Lecturer.
MISS A. LOBB, M.A.	Lecturer.
P. A. W. WALLACE, M.A.	Instructor.
W. M. WHITELAW, M.A.	Special Instructor.



## VICTORIA COLLEGE

O. P. EDGAR, B.A., PH.D. . . . .	Professor.
L. E. HORNING, B.A., PH.D. . . . .	Professor (Ob.).
C. E. AUGER, B.A. . . . .	Professor.
E. J. PRATT, PH.D. . . . .	Lecturer.

## TRINITY COLLEGE:

H. C. SIMPSON, M.A. . . . .	Professor.
L. C. A. HODGINS, M.A. . . . .	Associate Professor.
MISS M. CARTWRIGHT, B.A. . . . .	Lecturer.
P. A. CHILD, M.A. . . . .	Lecturer.

## ST. MICHAEL'S COLLEGE.

REV E. J. MCCORKELL, M.A. . . . .	Professor.
M. MARGARITA, B.A. . . . .	Associate Professor of Anglo-Saxon.
M. PERPETUA, M.A. . . . .	Associate Professor.
M. DOROTHEA, B.A. . . . .	Lecturer.

Composition: In the first two years of the undergraduate course original essays are required during the session from students taking the Pass and Honour Courses in English, even from those who have received dispensation from attendance upon lectures. These essays, after being carefully examined, are returned with suggestions and criticisms, and the marks assigned are reckoned in determining standing in the May examinations.

Throughout the course Composition shall be regarded as a subject distinct from literature, and candidates failing to secure the necessary standing in these essays are required to repeat the work of the year in English Composition.

Provision will be made by a special paper in English Composition for the examination of those candidates for Senior Matriculation who are not in attendance, and who have not presented the essays required.

## PASS COURSES

1a. Composition: The writing of at least four original compositions during the session.

1b. Familiarity with and intelligent appreciation of the following texts. *Sir Patrick Spens, Edward, The Braes o' Yarrow, Waly Waly*, POPE, *Rape of the Lock*; THOMSON, extracts from *Summer and Winter*; GRAY, *Spring, Eton College, Elegy*; GOLDSMITH, *Deserted Village*; BURNS, *Address to the Deil, To John Laprask, To a Mouse, Tam o' Shanter, Last May a Braw Wooer, A Man's a Man for a' that*, WORDSWORTH, *Sonnets*; SCOTT, *Rosalinde, Brignall Banks, Lochinvar, Old Mortality*, KEATS, *On Chapman's Homer, "Bright Star! would I", The Eve of St Agnes, On a Grecian Urn, To a Nightingale, To Autumn*; BROWNING, *Fra Lippo Lippo, The Bishop orders his Tomb, An Epistle*, HUXLEY, *A Piece of Chalk*; MORRIS, *The Lesser Arts*; BRYCE, *University Instruction*, HARDY, *The Return of the*

*Native*; selections from Canadian and recent British poetry. [The poetical selections in this paragraph are contained in *Representative Poetry* and *An Anthology of Modern Verse* (Methuen).] Two hours a week.

2a. Composition: The writing of at least four original compositions during the session

2b. SHAKESPEARE, with special study of *Romeo and Juliet*, *Henry IV, Parts I and II*, *Twelfth Night*, *Hamlet* Two hours a week.

3a. The writing of essays on subjects connected with one of the Third Year courses in literature.

3b. (i) Eighteenth century literature with special study of the following texts: DEFOE, *Robinson Crusoe*, SWIFT, *Gulliver's Travels*, ADDISON, *Select Essays* (edited by J. R. Green, Macmillan); JOHNSON, *Preface to Shakespeare*, *Lives of Addison and Pope*; FIELDING, *Tom Jones*; GOLDSMITH, *She Stoops to Conquer*; BOSWELL, *Life of Johnson* (May 18, 1763-end of 1764; April 3, 1773-end of May, 1773; March 21, 1775-May 21, 1775); BURKE, *Reflections on the French Revolution*; THACKERAY, *Esmond*; the selections from SWIFT, POPE, BURNS, BLAKE, CRABBE in *Representative Poetry*.

(ii) MILTON, selections in *Representative Poetry*, *Areopagitica*.

Three or two hours a week.

4a. The writing of essays on subjects connected with one of the Fourth Year courses in literature.

4b. Nineteenth century literature. selections from WORDSWORTH to MORRIS in *Representative Poetry*; selections from *An Anthology of Modern Verse* (Methuen), essays by WORDSWORTH, COLERIDGE and SHELLEY in *English Critical Essays of the Nineteenth Century* (World's Classics); LAMB, *Essays of Elia*; CARLYLE, *Sartor Resartus* (Books I and II), JANE AUSTEN, *Pride and Prejudice*; DICKENS, *David Copperfield*, ARNOLD, *The Function of Criticism* Three or two hours a week

#### HONOUR COURSES

1a. Composition: The writing of at least four original compositions during the session.

1c. CHAUCER, *Prologue*, *Nun's Priest's Tale*, *Squire's Tale*, with some outline of the history of the English language. One hour a week.

1d. Familiarity with and intelligent appreciation of the following texts: *Sir Patrick Spens*, *Edward*, *The Braes o' Yarrow*, *Waly Waly*; POPE, *Rape of the Lock*; GRAY, *Spring*, *Eton College*, *Elegy*, BURNS, *Address to the Deil*, *To John Lapraik*, *To a Mouse*, *Tam o' Shanter*, *Last May a Braw Wooer*, WORDSWORTH, *Sonnets*; SCOTT, *Rosabelle*, *Brignall Banks*, *Lochmaw*, *Old Mortality*, KEATS, *On Chapman's Homer*, "Bright Star, would I", *The Eve of St. Agnes*, *On a Grecian Urn*, *To a Nightingale*, *To Autumn*,

CARLYLE, *Signs of the Times*; GEORGE ELIOT, *The Mill on the Floss*; BROWNING, *Fra Lippo Lippi*, *The Bishop orders his Tomb, An Epistle*; HUXLEY, *A Piece of Chalk*, ARNOLD, *The Study of Poetry*, MORRIS, *The Lesser Arts*, BRYCE, *University Instruction*, HARDY, *The Return of the Native*; selections from Canadian and recent British poetry. [The poetical selections in this paragraph are contained in *Representative Poetry* and *An Anthology of Modern Verse* (Methuen)] Two hours a week.

2a. Composition. The writing of at least four original compositions during the session.

2b. SHAKESPEARE, with special study of *Romeo and Juliet*, *Henry IV, Parts I and II*, *Twelfth Night*, *Hamlet*. Two hours a week.

2c. An outline of sixteenth century literature with special study of the following texts: MORE, *Utopia*; ASCHAM, *The Scholemaster*; SIDNEY, *Apology for Poetry*; HAKLUYT, *Voyages of Gilbert and Drake*, HOOKER, *Ecclesiastical Polity*, Book I; BACON, *Selected Essays, Advancement of Learning*, Book I to the beginning of his treatment of "the Dignity of Knowledge", SPENSER, *Faerie Queene*, Book I, the selections from WYATT to HALL in *Representative Poetry*. Two hours a week.

3a The writing of essays on subjects connected with one of the Third Year courses in literature.

3b (i). Eighteenth century literature with special study of the following texts: DEFOE, *Robinson Crusoe*; SWIFT, *Gulliver's Travels*; ADDISON, *Select Essays*, edited by J. R. Green (Macmillan); JOHNSON, *Preface to Shakespeare, Lives of Addison and Pope*; FIELDING, *Tom Jones*; GOLD-SMITH, *She Stoops to Conquer*, BOSWELL, *Life of Johnson* (May 16, 1763-end of 1764; April 3, 1773-end of May, 1773, March 21, 1775-May 21, 1775); BURKE, *Reflections on the French Revolution*, THACKERAY, *Esmond*; the selections from SWIFT, POPE, BURNS, BLAKE, CRABBE in *Representative Poetry*.

(ii) MILTON, selections in *Representative Poetry, Areopagitica*.

Three or two hours a week

3c. Selections from WYATT, *An Anglo-Saxon Reader*, grammar and outlines of Old English literature.

3d. Seventeenth-century literature with special study of MILTON, *L'Allegro, Il Penseroso, Arcades, Comus, Lycidas, Sonnets, Paradise Lost, Paradise Regained, Samson Agonistes*, selections from JOHNSON to BUTLER inclusive in *Representative Poetry*; MILTON, *Of Reformation, The Reason of Church Government, Of Education, Areopagitica*; BROWNE, *Religio Medici*. Two hours a week.

3e. Eighteenth century literature as in 3b (i) together with the omitted selections from DRYDEN to CRABBE inclusive in *Representative Poetry* and DRYDEN, *Essay of Dramatic Poesy*. Three or two hours a week.

4a. The writing of essays on subjects connected with one of the Fourth Year courses in literature.

4b Nineteenth century literature: selections from WORDSWORTH to MORRIS in *Representative Poetry*; selections from *An Anthology of Modern Verse* (Methuen); essays by WORDSWORTH, COLERIDGE and SHELLEY in *English Critical Essays of the Nineteenth Century* (World's Classics), LAMB, *Essays of Elia*, CARLYLE, *Sartor Resartus* (Books I and II); JANE AUSTEN, *Pride and Prejudice*; DICKENS, *David Copperfield*; ARNOLD, *The Function of Criticism*. Three or two hours a week.

4c. (i) Historical English grammar.

(ii) Middle English literature: selections from COOK, *A Literary Middle English Reader*, CHAUCER, *House of Fame*, *Knight's Tale*.

Two hours a week.

4d NEWMAN, *Apologia*, *The Idea of a University*, *Preface and Discourses V-VIII*, J. S. MILL, *Essays on Bentham*, *Coleridge*, *Civilization*, *Utilitarianism*, *Liberty*, CARLYLE, *Past and Present* Book III, *Life of John Sterling*; RUSKIN, *Unto this Last*; ARNOLD, *Culture and Anarchy*, *Democracy*, *Equality*; MORLEY, *Compromise*. Two hours a week.

4e. The Development of the English Drama to 1842: reading of the following texts: *Noah's Flood*, *The Sacrifice of Isaac*, *Secunda Pastorum*, *Everyman* (Pollard's *Miracle Plays*), UDALL, *Ralph Roister Doister*; LYL, *Endymion*; GREENE, *Friar Bacon*, MARLOWE, *Tamburlaine*, Part I, *Edward II*; KYD, *Spanish Tragedy*; SHAKESPEARE, *Othello*, *King Lear*, *Antony and Cleopatra*, *Coriolanus*, *The Tempest*, BEN JONSON, *Every Man in his Humour*; BEAUMONT and FLETCHER, *Philaster*; WEBSTER, *Duchess of Malfi*. Two hours a week.

## GERMAN

### UNIVERSITY COLLEGE.

W. H. VAN DER SMISSEN, PH.D.	Professor Emeritus
G. H. NEEDLER, B.A., PH.D.	Professor.
B. FAIRLEY, M.A., PH.D.	Associate Professor.
T. HEDMAN, PH.B.	Assistant Professor.
G. E. HOLT, M.A., MUS.BAC.	Lecturer.

### VICTORIA COLLEGE:

L. E. HORNING, B.A., PH.D.	Professor (Ob.).
A. E. LANG, M.A.	Professor.
MISS M. E. T. ADDISON, B.A.	Lecturer.
J. D. ROBINS, M.A.	Lecturer.

### TRINITY COLLEGE:

A. H. YOUNG, M.A., D.C.L.	Professor.
MISS L. C. SCOTT, M.A.	Associate Professor

### ST. MICHAEL'S COLLEGE:

REV. E. J. WELTY, B.A.	Associate Professor.
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## PASS COURSES

1a. Grammar, dictation; pronunciation; translation from modern German; translation from English into German. Four hours a week.

1b. Reading of easy prescribed texts in scientific German; translation of similar passages at sight. Two hours a week.

2a. Grammar, dictation; pronunciation, translation from modern German, translation from English into German. Three hours a week.

2b. Reading of prescribed texts in scientific German; translation of scientific German at sight. Two hours a week.

3a. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; outlines of the history of German literature to 1740; life and works of LESSING and SCHILLER, with special attention to LESSING, *Emilia Galotti*; SCHILLER, *Poems* (ed. Nollen), *Die Jungfrau von Orleans*. Supplementary reading. Three hours a week.

4a. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; outlines of the history of German literature from 1740; life and works of GOETHE with special attention to *Poems* (ed. Schütze), *Faust*, Part I. Supplementary reading. Three hours a week.

## HONOUR COURSES

1c. Translation at sight from modern German; FIEDLER, *Book of German Verse* (pages 17-161), KELLER, *Kleider machen Leute*; LESSING, *Minna von Barnhelm*. Supplementary reading. Two hours a week.

1d. Oral term work; composition. Two hours a week.

1e. Political and social history of Germany to 1500

1f. Composition; writing of business letters, practice in reading and writing German script; oral exercises. One hour a week.

1g. Reading of selected texts in German. Two hours a week.

1h. German pronunciation and phonetics. One half-hour a week.

2c. Translation at sight from modern German; history of German literature in the eighteenth century with special attention to LESSING and SCHILLER; LESSING, *Emilia Galotti*, *Nathan der Weise*; SCHILLER, *Die Jungfrau von Orleans*, *Wallensteins Tod*. Supplementary reading. Two hours a week.

2d. Oral term work; composition. One hour a week.

2e. Political and social history of Germany from 1500 to 1713. One half-hour a week.

2f. Reading of German texts; practice in business correspondence and conversation in German. Three hours a week.

3b. Life and works of GOETHE with special attention to *Lyrical Poems* (ed. Schütze), *Iphigenie auf Tauris*, *Götz von Berlichingen*, *Dichtung und Wahrheit* (ed. von Jagmann), *Faust*, Part I. Supplementary reading. Three hours a week

3c. Oral term work; composition. One hour a week

3d. Political and social history of Germany from 1713 to 1815. One hour a week.

3e. Essays on prescribed topics.

3f. Reading of German texts; practice in business correspondence and conversation in German. Three hours a week.

4b. The development of German literature of the nineteenth century, with special attention to KLEIST, *Prinz Friedrich von Homburg*, GRILLPARZER, *Ein treuer Diener seines Herrn*; HEINE, *Romanzero*, *Die romantische Schule*, KELLER, *Der Landvogt von Gresensee*, THOMAS MANN, *Buddenbrooks*; HAUPTMANN, *Festspiel*; *Dichter des 19. Jahrhunderts* (ed. Weicken). Supplementary reading. Two hours a week.

4c. Oral term work; composition. One hour a week.

4d. Middle High German grammar; history of the German language; history of Middle High German literature; WRIGHT, *Middle High German Primer*. One hour a week.

4e. Political and social history of Germany from 1815 to the present. One hour a week.

4f. Reading of German texts; practice in business correspondence and conversation in German. Three hours a week.

4g. Essays on prescribed topics.

## FRENCH

### UNIVERSITY COLLEGE:

JOHN SQUAIR, B.A.	... ..	Professor Emeritus.
J. H. CAMERON, M.A.	.. . . .	Professor.
J. S. WILL, B.A., PH D	.. . . .	Professor.
ST. E. DE CHAMP, B. ÈS L, O I.P.	.... .	Associate Professor
F. C. A. JEANNERET, B.A.	.....	Associate Professor.
M. MORAUD, L. ÈS L., AGRÉGÉ DE L'UNIVERSITÉ.	.....	Associate Professor.
H. S. McKELLAR, B.A.	. . . . .	Assistant Professor.
L. ALLEN, PH.D.	.... .	Assistant Professor.
J. G. ANDISON, A.M., PH D.	. . . . .	Lecturer.
W. J. McANDREW, M.A.	. . . . .	Lecturer.
L. A. BIBET.	. . . . .	Instructor (part-time).
A. E. TILBY	. . . . .	Instructor (part-time).
MISS J. C. LAING, B.A.	. . . . .	Instructor.
MISS F. COLE, M.A.	.. . . .	Assistant.
MISS C. LE PRÉVOST	. . . . .	Special Instructor.

## VICTORIA COLLEGE\*

H. E. FORD, M.A., PH.D . . . . .	<i>Professor.</i>
VICTOR DE BEAUMONT, A.M. . . . .	<i>Associate Professor.</i>
MISS M C ROWELL, M.A . . . . .	<i>Lecturer.</i>
A. LACEY, M.A . . . . .	<i>Lecturer.</i>
H LASSERRE, B ÈS L., B. ÈS SC, L ÈN DR . . . . .	<i>Lecturer.</i>

## TRINITY COLLEGE

R. E. L. KITTREDGE, M.A. . . . .	<i>Professor</i>
L. A. BISSON, M A . . . . .	<i>Associate Professor.</i>
A. A. NORTON, B.A. . . . .	<i>Lecturer.</i>
MISS L. C. SCOTT, M.A . . . . .	<i>Reader.</i>

## ST. MICHAEL'S COLLEGE:

REV. W. H. MURRAY, B.A. . . . .	<i>Associate Professor.</i>
M. AGNES, B.A. . . . .	<i>Lecturer.</i>
REV. E. L. RUSH, B A. . . . .	<i>Instructor</i>

NOTE —In order to be a member of any class in French, a student must satisfy the instructor as to his ability to profit by the instruction given. Supplementary reading under the direction of the staff may be required of students in all years.

## PASS COURSES

1a. Grammar; dictation; translation from English into French; translation at sight from modern French. Four hours a week.

1b. Study of texts and sight work of scientific nature. Two hours a week.

2a. Grammar; dictation; translation from English into French; translation at sight from modern French. Three hours a week.

2b. Study of texts and sight work of scientific nature. Two hours a week.

3a (1) Standards of the classical age and the main ideas of the eighteenth century, studied in French literature from Malherbe to André Chénier. MORNET, *Histoire de la littérature et de la pensée françaises; French Prose of the XVIIth Century* (ed. Warren); CORNEILLE, *Le Cid*; MOLIÈRE, *Le Misanthrope, Le Bourgeois Gentilhomme*; RACINE, *Andromaque*; LA FONTAINE, *Fables; Eighteenth Century French Readings* (ed Schinz).

(2) Supplementary reading from the authors of the period, carried on under the direct supervision of the instructors, forms an essential part of this course.

(3) Composition, translation at sight from modern French. Three hours a week.

4a (1). Forces and movements in French literature since 1750. ADRY, AUDIC ET CROUZET, *Histoire illustrée de la littérature française*, or MORNET, *Histoire de la littérature et de la pensée françaises; Pages choisies de J.-J. ROUSSEAU* (ed. Rocheblave); *French Lyrics of the XIXth Century* (ed. Henning), VICTOR HUGO, *Hernani*; BALZAC, *Le Curé de Tours*; ÉMILE AUGIER, *Le Fils de Gsboyer*, RENÉ BAZIN, *Le Blé qui lève*.

(2) Supplementary reading from the authors of the period, carried on under the direct supervision of the instructors, forms an essential part of this course.

(3) Composition; translation at sight from modern French. Three hours a week.

#### COURSES FOR STUDENTS IN COMMERCE AND FINANCE

1c. Study of modern French texts, translation at sight. Two hours a week.

1d. Exercises in French grammar and composition. One hour a week.

1e. Practical work in oral French. One hour a week

2c. Study of ÉMILE MALAKIS, *Le Français du Commerce* and of modern French texts. Two hours a week.

2d. Exercises in French grammar and composition. One hour a week.

2e. Practical work in oral French. One hour a week.

3b. Practical exercises in French conversation and commercial correspondence. Study of the following texts: E. JANAU, *Commercial Correspondence*; *La France qui travaille* (ed. Jago), POOLE and BECKER, *Commercial French*. Two hours a week.

4b. Practical exercises in French Conversation, and Commercial Correspondence. Study of the following texts: POOLE and BECKER, *Commercial French II*, E. JANAU, *Commercial Correspondence*; P. CLERGET, *Manuel d'Économie commerciale*.

#### HONOUR COURSES

In determining the standing of all candidates in Honour French, examiners will take into account the reports of the instructors in this subject.

Students taking the full Honour French course must make satisfactory progress in the oral use of the language. Opportunity for this work will be provided in each of the four years.

1f. Grammar; dictation; pronunciation; translation from English into French; translation at sight from modern French.



Survey of French literature with special reference to the mediæval period. The following texts are prescribed for critical study: EUGÈNE BRIEUX, *La Robe rouge*, ANATOLE FRANCE, *Le Crime de Sylvestre Bonnard*; ALPHONSE DAUDET, *Lettres de mon moulin*, *Quelques contes des romanciers naturalistes* (ed. Dow and Skinner), *French Lyrics* (ed. Canfield). Four hours a week.

1g. French Phonetics.

1h. Outlines of Mediæval History.

2f. History of French literature from the middle of the sixteenth century to the end of the seventeenth century, illustrated by the reading of texts from which the following are prescribed for critical study: *French Verse of the XVIIth Century* (ed. Wright); BOSSUET, *Oraison funèbre de Henriette de France*, LA BRUYÈRE, *Caractères (De la Cour)*, CORNEILLE, *Le Cid*; RACINE, *Andromaque*, *Bérénice*; MOLIERE, *L'Avaro*, *Le Misanthrope*; BOILEAU, *L'Art poétique*, LA FONTAINE, *Fables* (ed. Clément) Two hours a week.

2g. History of France in the sixteenth and seventeenth centuries.

2h. Simple narrative composition; translation from English into French; translation at sight. One hour a week.

3c. French history, civilization and literature from Louis XIV to the Restoration. Extensive readings in French authors from Fénelon to Chateaubriand, under the direct supervision of the instructors, with close study of representative works

3d. The Classic ideal as represented in critical writings from the Pléiade to the beginnings of Romanticism. The following texts will be used: DU BELLAY, *Défense et illustration de la langue française*; BOILEAU, *Selections from the Satires, Epîtres*, and the *Art poétique*; VOLTAIRE, *Essai sur la poésie épique*; DIDEROT, *De la poésie dramatique*; ROUSSEAU, *Lettre à M. d'Alembert*; MME DE STAËL, *De la littérature*.

3e. Composition; translation from English into French; translation at sight.

3f. Essays on prescribed topics.

4c. (1) History of French literature from 1815 to the present, and acquaintance with representative works of this period (2) Critical study in modern lyric poetry (VICTOR HUGO and LECONTE DE LISLE); in the modern novel (HONORÉ DE BALZAC and PAUL BOURGET) and in the modern drama (HENRY BECQUE and PAUL HERVIEU). (3) Readings from French-Canadian poetry.

4d. History of France from the beginning of the nineteenth century to the present.

4e. Composition; translation from English into French; translation at sight from French authors of any period.

4f. Elementary course in Old French.

4g. Essays on prescribed topics

## ITALIAN AND SPANISH

M. A. BUCHANAN, B.A., PH.D.	Professor.
J. E. SHAW, A.B., PH.D.	Professor.
E. GOGGIO, M.A., PH.D.	Assistant Professor.
G. C. PATTERSON, B.A.	Assistant Professor.
JUAN CANO, A.M.	Assistant Professor.
H. W. HILBORN, B.A.	Lecturer.

## ITALIAN

1a. For Pass and Honours Grammar, pronunciation and dictation; translation, oral exercises Text-books: ARDIB-COSTA, *Italian Lessons, L'Italia* (Wilkins and Marinoni), *Due commedie moderne* (Goggio). Four hours a week.

1b For Honours. Italian Phonetics One hour a week (Michaelmas term).

1c. For students who have matriculated in Italian The same as 2a.

2a. For Pass and Honours Review of the grammar; exercises in writing, pronunciation and translation. Text-books: GRANDGENT, *Italian Grammar; Il Risorgimento* (Van Horne), GIACOSA, *Tristi Amori* (Altrocchi and Woodbridge), FUCINI, *Novelle e poesie* (Furst). Three hours a week.

2b For students who have matriculated in Italian. For Pass, the same as 3a, for Honours, the same as 3a, 3b, 3c.

3a For Pass and Honours. Lectures on 19th century literature and history, Carducci and Leopardi. Study of texts: *Antologia Cas ducciana* (Mazzoni e Picciola), LEOPARDI, *Poesie* (Stracchi). Supplementary reading for Pass, HAUETTE, *Littérature italienne*, for Honours, ROSSI, *Storia della letteratura italiana*, Vol. III, CROCE, *Giosuè Carducci*, DE SANCTIS, *Leopardi*. Composition, pronunciation and conversation Three hours a week.

3b. For Honours Lectures on 16th century literature and history. Study of CELLINI, *Vita* (Padovan), MACHIAVELLI, *Il Principe* (Lisio). Supplementary reading. ROSSI, *Storia della letteratura italiana*, Vol. II, SYMONDS, *A Short History of the Renaissance* (Smith and Elder, London), COTTERILL, *Italy from Dante to Tasso*. Lectures in Italian on the art, history and literature of Italy Two hours a week.

3c For Honours. Essays on prescribed topics.

3d. For students in Commerce and Finance. Reading of prescribed texts; composition, pronunciation and oral practice, commercial correspondence Text-books. HECKER, *Il Piccolo Italiano*; ORSI, *Italia Moderna* Three hours a week.

3e. For students who have matriculated in Italian. For Pass, the same as 4a, for Honours, the same as 4a, 4b, 4c

4a. For Pass and Honours. Lectures on 13th and 14th century literature and history. Study of DANTE, *Divina Commedia* (Grandgent). Supplementary reading for Pass, HAUETTE, *Littérature italienne*; for Honours, ROSSI, *Storia della letteratura italiana*, Vol. I, DANTE, *Vita*

*nuova*, GRANDGENT, *Dante*. Composition, pronunciation and conversation. Three hours a week.

4b. For Honours. Lectures on Petrarch. Study of PETRARCH, *Rime* (Carducci e Ferrari). Supplementary reading: DE SANCTIS, *Saggio Critico sul Petrarca*. Lectures in Italian on the art, history and literature of Italy. Two hours a week.

4c. For Honours. Essays on prescribed topics.

4d. For students in Commerce and Finance. Reading of prescribed texts; composition and oral practice; commercial correspondence. Text-books: PITMAN, *Mercantile Correspondence*; RICCI, *Commercial Italian Grammar*. Lectures on the history, geography and economic development of Italy. Three hours a week.

4e. For students who have matriculated in Italian. For Pass, reading of prescribed texts. Three hours a week. For Honours, study of a period of the literature. Five hours a week.

## SPANISH

1a. Grammar, pronunciation and dictation; translation; oral exercises. Text-books: CRAWFORD, *First Book in Spanish*; HILLS, *Spanish Tales for Beginners* (for Honours), WILKINS, *Beginners' Spanish Reader* (for Pass). Four hours a week.

1b. Spanish Phonetics. One hour a week (Michaelmas term).

1c. Elementary Spanish for students in the Faculty of Applied Science.

1d. For students who have matriculated in Spanish. The same as 2a.

2a. Grammar; pronunciation and dictation, translation, composition; oral exercises. Text-books: PALACIO VALDÉS, *La Hermana San Sulpicio* (ed. Gill); COOL, *Spanish Composition*; ESPINOSA, *Composition*. Three hours a week.

2b. For students who have matriculated in Spanish. For Pass, the same as 2a; for Honours, VALERA, *Pepita Jiménez*; PÉREZ GALDÓS, *Doña Perfecta*. Composition in Spanish, pronunciation and oral exercises; lectures in Spanish. Supplementary reading: BLASCO IBÁÑEZ, *Cuentos valencianos*. Three hours a week.

3a. History of Spanish literature in the nineteenth century. Text-books: ESPRONCEDA, *El Estudiante de Salamanca* (ed. Northup), VALERA, *Pepita Jiménez* (ed. Lincoln), PÉREZ GALDÓS, *Doña Perfecta*, MARTÍNEZ SIERRA, *Sueño de una noche de agosto*, ECHegaray, *O locura o santidad* (ed. Geddes); BENAVENTE, *La malquerida*, FITZMAURICE-KELLY, *Chapters on Spanish Literature*. Three hours a week.

3b. Composition in Spanish, pronunciation and oral exercises, lectures in Spanish on the art, history and literature of Spain and Spanish America. Supplementary reading: BLASCO IBÁÑEZ, *Cuentos valencianos*. Two hours a week.

3c. Essays on prescribed topics.

3d. For students who have matriculated in Spanish. For Honours, the same as 4a, 4b; for Pass, the same as 4a.

3e. For students in Commerce and Finance Text-books: McHALE, *Commercial Spanish*; VALERA, *Pepita Jiménez*; PÉREZ GALDÓS, *Doña Perfecta*. Composition in Spanish, pronunciation and oral exercises; lectures in Spanish. Supplementary reading. McHALE, *Un Viaje a Sud América*. Three hours a week.

3f. For students in Commerce and Finance who have matriculated in Spanish. The same as 4e.

4a. History of Spanish literature: the Golden Age Text-books: CERVANTES, *Don Quixote*, *Lazarillo de Tormes* (ed. Cejador); LOPE DE VEGA, *Amar sin saber a quién*, CALDERÓN, *La vida es sueño*, *The Oxford Book of Spanish Verse*; FITZMAURICE-KELLY, *Chapters on Spanish Literature*. Three hours a week

4b. Composition, pronunciation and oral exercises, lectures in Spanish on the art, history and literature of Spain and Spanish America Supplementary reading. BLASCO IBÁÑEZ, *Mare nostrum*. Two hours a week.

4c. Essays on prescribed topics

4d. For students who have matriculated in Spanish. Reading of prescribed texts; composition, pronunciation and oral practice; essays. Three hours a week for Pass; five hours a week for Honours.

4e For students in Commerce and Finance Reading of prescribed texts, composition; pronunciation, oral practice, based on mercantile topics; commercial correspondence. Text-books M. ROMERA-NAVARRO, *Manual del Comercio*, CARLOS F. McHALE, *Commercial Spanish*. Lectures on the history, geography and economic development of Spanish America. Text-book W. R. SHEPHERD, *Latin America*. Three hours a week.

4f. For students in Commerce and Finance who have matriculated in Spanish Reading of prescribed texts; composition, pronunciation and oral practice; essays. Three hours a week

## PHONETICS

Elementary physiological phonetics, with practical exercises in the sounds of the modern languages studied. One hour a week in the Second Year of the Modern Language Course.

## HISTORY

G. M. WRONG, M.A., LL.D.	Professor.
G. M. SMITH, M.A.	Associate Professor.
R. FLENLEY, M.A., B.LITT.	Associate Professor.
W. P. M. KENNEDY, M.A., LITT.D.	Assistant Professor.
H. H. WRONG, B.A., B.LITT.	Assistant Professor.
J. B. BREBNER, B.A.	Lecturer.
Miss M. G. REID, B.A., B.LITT.	Lecturer.
L. B. PEARSON, B.A.	Lecturer.
G. P. DE T. GLAZEBROOK, B.A.	Lecturer.

(NOTE.—No text-books are prescribed in History. Some of the more important books are listed after the description of each course, for the guidance of students.)

#### PASS COURSES

1a. The History of Canada: from the age of discovery to the present day. For the main subjects of study and list of books, see Honour Course 1c.

1b The History of the United States: from the Revolution to the present day. For the main subjects of study and list of books, see Honour Course 1d.

2a. The Renaissance and the Reformation in Europe with an introductory survey of the Middle Ages. For the main subjects of study and list of books, see Honour Course 2d.

2b. British History, 1485-1689. For the main subjects of study and list of books, see Honour Course 2e.

3a. The History of Europe, 1763-1815. For the main subjects of study and list of books, see Honour Course 3c.

3b. British History, 1689-1815. For the main subjects of study and list of books, see Honour Course 3d.

4a. The History of Europe, 1815-1914. For the main subjects of study and list of books, see Honour Course 4d.

4b British History, 1815-1914. For the main subjects of study and list of books, see Honour Course 4e.

4c. The Institutions of the modern British Empire: a comparative study. The governments of Great Britain, Canada and the other Dominions, India and the Crown Colonies; the chief problems of the British Commonwealth. Books. DICEY, *Law of the Constitution*, LOWELL, *Government of England*; KEITH, *Dominion Home Rule*, and *The Constitution, Administration, and Laws of the Empire*; FIGGIS, *The Irish Free State Constitution*; ILBERT and MESTON, *The New Constitution of India*.

#### HONOUR COURSES

1c. The History of Canada: the age of discovery; the French explorers and the fur trade; society and government in New France; the struggle for supremacy of France and Britain; early British rule in Canada; the Loyalist migration and the English-speaking settlements, rebellion leading to political union; the federation of Canada; the expansion to the Pacific, growth towards nationhood

Books. FISKE, *The Discovery of America*, 2 volumes; the works of FRANCIS PARKMAN; MUNRO, *The Crusaders of New France*; WRONG, *The Conquest of New France*, SKELTON, *The Canadian Dominion* (Chronicles of America), EGERTON, *Canada, 1763-1921*, LORD DURHAM's *Report* (ed. Lucas); KENNEDY, *The Constitution of Canada*, and *Documents of the Canadian*

*Constitution*; and biographical study from the series, "The Chronicles of Canada", or "The Makers of Canada", especially Dorchester, Sydenham, Macdonald and Laurier.

1d. The History of the United States. the colonial period, the American Revolution, the framing of the federal constitution, territorial expansion; the Civil War; the United States as a great power.

Books. MUZZEV, *An American History*, LECKY, *The American Revolution*, EGERTON, *The American Revolution*; FISKE, *The American Revolution*, 2 volumes, WRONG, *Washington and his Comrades in Arms* (Chronicles of America); OLIVER, *Alexander Hamilton*, CHARNWOOD, *Abraham Lincoln*, WOOD, *Captains in the Civil War* (Chronicles of America), RHODES, *History of the Civil War, 1861-1865*, PAXSON, *Recent History of the United States*. For students wishing to read extensively the following are recommended: *The Cambridge Modern History*, Vol VII; CHANNING, *History of the United States*; SIR G. TREVELYAN's volumes on *The American Revolution*; and for the causes and effects of the Civil War, J. F. RHODES, *History of the United States, 1850-1898*.

2c. Mediaeval Europe: beginning with the Roman Empire of the 4th century and closing with the development of the monarchies of France and England in the 12th and 13th centuries. The disintegration of the Roman Empire, the barbarian migrations and settlements; Christianity and the rise of the Papacy; the origin and spread of Islam; the Holy Roman Empire and the Papacy, feudalism and the later barbarian invasions; monasticism; the friars, the crusades, the French monarchy, the unification of England, mediaeval trade and the rise of towns; mediaeval civilization.

Books for outlines, ORTON, *Outlines of Mediaeval History*, THORNDIKE, *Mediaeval Europe*, BRYCE, *Holy Roman Empire*, *The Cambridge Mediaeval History*, BURY, *Later Roman Empire*, HODGKIN, *Italy and her Invaders*, BARNARD, *Mediaeval England* (ed Davis), COULTON, *A Mediaeval Garner*, *Five Centuries of Religion*, MUNRO and SELLERY, *Mediaeval Civilization*, and biographies of principal figures

2d. A short introductory course on the later Middle Ages followed by the Renaissance and the Reformation: from the invasion of Italy by Charles VIII to the Treaty of Westphalia; political aspects of the Renaissance in Italy—Milan, Venice, Florence, the Papal States, Naples, the art of the Renaissance; the Reformation in Germany, the Hapsburg dominions and the empire of Charles V; the rise and decline of the Spanish power, centralization and absolutism in France; the Hapsburg-Valois feud, the Counter-Reformation; the revolt of the Spanish Netherlands, the wars of religion in France, Sweden under the Vasa, the Thirty Years' War, France under Henry IV and Louis XIII, the rise and decline of the Turkish power; political theory from Machiavelli to Grotius

Books: for the introductory course, DAVIS, *Medieval Europe*, DAVIES, *Medieval England, 1066-1500*, LODGE, *Close of the Middle Ages*, HUIZINGA, *The Waning of the Middle Ages*; for the period 1494-1648, JOHNSON, *Europe in the 16th Century*; WAKEMAN, *The Ascendancy of France*, SYMONDS, *The Renaissance in Italy*, Vol. I; CREIGHTON, *History of the Papacy*; LINDSAY, *The Reformation*, BATIFOLL, *The Century of the Renaissance in France*; ARMSTRONG, *Charles V.* For reference, the *Cambridge Modern History*.

2e. British History, 1485-1689. The Tudor system of government; political and diplomatic beginnings of modern English history; the agrarian revolution of the 16th century, the English Reformation; exploration and colonization; relations with France and Spain; the Puritan Revolution, political and religious, the Stuart theory and practice; the Long Parliament and the Civil War, Cromwell and the Commonwealth, the Stuart Restoration, foreign and domestic policies of the last Stuarts; the Revolution of 1689; Ireland under the Tudors and Stuarts, political theories of the period.

Books: RAMSAY MUIR, *Short History of the British Commonwealth*, Vol. I, *Political History of England*, Vol. V (Fisher) and Vol. VI (Pollard), POLLARD, *Henry VIII, Factors in Modern History*; CREIGHTON, *Elizabeth*, TREVELYAN, *England under the Stuarts*, SERLEY, *Growth of British Policy*, FIRTH, *Cromwell*, MORLEY, *Cromwell*

2f The Constitutional History of England to 1603 Original documents will be used. The origins, Anglo-Saxon institutions and Norman feudalism; the 11th and 12th centuries, administrative and judicial centralization, local government, relations of Church and State, the feudal contract; the evolution of Parliament; the legislation of Edward I; the Lancastrian Experiment, Tudor government—the Privy Council, the conciliar courts, relations of Crown and Parliament, the ecclesiastical settlement.

Books: ADAMS AND STEPHENS, *Select Documents of English Constitutional History*, STUBBS, *Select Charters*, TANNER, *Tudor Constitutional Documents*; the Constitutional Histories of Maitland and Adams; PROTHERO, introduction to *Statutes and Constitutional Documents*, MCILWAIN, *High Court of Parliament*, BALDWIN, *King's Council*.

2g. A general survey of British and European History, 1815-1914. For list of topics see 4d and 4e below

Books: TREVELYAN, *British History in the 19th Century*; MUIR, *Short History of the British Commonwealth*, vol. II, FYFFE, *History of Modern Europe*, GOOCH, *Modern Europe, 1878-1919*, LIPSON, *Europe in the Nineteenth Century*. See also biographies under 4e.

2h. Selected texts in Modern History: a course of study based on selections from the works of leading French or German historians as a preparation for the independent study of History in one of these languages.

Texts for 1924-5: either MICHELET, *Histoire de France*, Vol. IX (*La Renaissance*) or BURCKHARDT, *Cultur der Renaissance in Italien*.

3c. Europe, 1763-1815. Political and social conditions in Europe, and especially in France, before 1789; the French philosophers; the failure of enlightened despotism. The beginning of the Revolution in France; the appeal to force, the reforms of the Constituent Assembly; the outbreak of war, the second revolution, and the fall of the throne; the Convention, the Jacobin government, and the Reign of Terror. The failure of the middle-class reaction 1794-99. The advent of Napoleon; the reorganization of France under the Consulate; the path to Empire and the conquest of Europe; Napoleonic statesmanship in Germany and Italy; the Continental System; the war of Liberation and the fall of Napoleon.

Books: LECKY, *England in the Eighteenth Century* (chapters on France); TOCQUEVILLE, *France before the Revolution*; YOUNG, *Travels in France*; SOREL, *L'Europe et la Révolution Française*, vol. i; ACTON, *Lectures on the French Revolution*, MADELIN, *French Revolution*; AULARD, *French Revolution*; BARTHOLOMEW or WILLERT, *Mirabeau*, MADELIN, *Danton*; BELLOC, *Robespierre*; VANDAL, *L'Avènement de Bonaparte*; lives of Napoleon by FOURNIER, ROSE and FISHER, FISHER, *Bonapartism*; *Napoleonic Statesmanship in Germany*, MOWAT, *The Diplomacy of Napoleon*; *Cambridge Modern History*, Vols VIII and IX.

3d. British History, 1689-1815. The relations of England, Scotland and Ireland, the evolution of Cabinet government and of the Whig and Tory parties, with special reference to the work of Walpole, Chatham and the younger Pitt, British foreign and colonial policy, the long struggle with France, especially in the field of colonial enterprise; the loss of the American Colonies, society before and during the Industrial Revolution, the Methodist movement; the effects of the French Revolution on English life and thought.

Books. MUIR, *Short History of the British Commonwealth*; FLETCHER, *Introductory History of England*, Vol. iii; TREVELYAN, *England under the Stuarts*; ROBERTSON, *England under the Hanoverians*, MACAULAY, *History of England*; *Essays*; LECKY, *England in the Eighteenth Century*; MORLEY, *Walpole*; BIRCH, WILLIAMS, *Chatham*; HOLLAND ROSE, *Pitt*; ROSEBERRY, *Pitt*; TREVELYAN, *Early Life of C. J. Fox*, COUPLAND, *Wilberforce*.

3e. The Constitutional History of England since 1603. a course based on the following books of documents: PROTHERO, *Constitutional Documents, 1558-1625*; GARDINER, *Documents of the Puritan Revolution, 1625-1660*; GRANT ROBERTSON, *Select Cases, Statutes, Documents, 1660-1832*. The development of the modern Constitution; the struggle for the "rule of law" and the sovereignty of Parliament in the 17th century, with the constitutional experiments of the Cromwellian interregnum, the unions with Scotland and Ireland; the rise of parties and the cabinet system; reform in central and local government in the 19th century, the advent of political democracy, the working of modern British institutions.



Books: the Constitutional Histories of Maitland and Adams, McILWAIN, *High Court of Parliament*; DICEY, *Law of the Constitution*; LOWELL, *Government of England*, HOLDSWORTH, *History of English Law*, vol. i; ERSKINE MAY, *Constitutional History*, ANSON, *Law and Custom of the Constitution*.

3f. Political Theory (Ancient). a course based on Aristotle's *Politics*, Plato's *Republic*, and Maine's *Ancient Law*. The *Politics* will be used as a basis for discussion of the following topics. the Greek city state; the nature and end of the state; political rights; the sphere of law, the state and property; the state and education, the Greek conception of democracy.

3g. A special subject studied with reference to original authorities. A list of subjects is printed below

4d. The History of Europe, 1815-1914: a study of the national movements of the 19th century and their effect upon international relations. Special attention will be paid to. the settlement of Vienna and the Congress period, the revolutions of 1848; the age of Napoleon III and the foundation of the Third French Republic; the work of Cavour in Italy and of Bismarck in Germany, the growth of German imperialism and the resultant diplomatic upheaval; the modern history of the Near Eastern and Balkan problems; the causes of the Great War

Books LIPSON, *Europe in the Nineteenth Century*, SEIGNOBOS, *Political History of Contemporary Europe*, A. PHILLIPS, *Modern Europe*; FUTER, *World History, 1815-1920*, GOOCH, *Modern Europe, 1878-1919*, Cambridge *Modern History*, Vols. X-XII, MOWAT, *History of European Diplomacy*, for France, BOURGEOIS, *Modern France*, GUEDALLA, *Napoleon III*, for Italy, STILLMAN, *Union of Italy*, BOLTON KING, *Mazzini*, ORSI, *Cavour*; for Germany, ROBERTSON, *Bismarck*, and DAWSON, *German Empire*.

4e. The History of Great Britain, 1815-1914 The Industrial Revolution and the social history of industrialized England, reform in central and local government, the Benthamite philosophy; Free Trade; the Manchester School; Liberalism; the working class movements, e.g., Chartism and the later Socialism; Trade Unionism; the advent of democracy and its influence on policy and institutions; the history of political parties; the development of British "Imperial" opinion; the Irish question; domestic politics under Gladstone, Disraeli, Salisbury; foreign policy from Castlereagh to Sir Edward Grey

Books: TREVELYAN, *British History in the Nineteenth Century*; MUIR, *Short History of the British Commonwealth*, vol. ii; EGERTON, *History of British Foreign Policy*; Cambridge *History of British Foreign Policy*; DICEY, *Law and Opinion in England*. Biographies. WALLAS, *Francis Place*, TREVELYAN, *Grey of the Reform Bill*, BRIGHT; MONYPENNY and BUCKLE, *Disraeli*; MORLEY, *Gladstone*; CECIL, *Salisbury*, STRACHEY, *Queen Victoria*.

4f. The Constitutional History of Canada from 1759 to the present day the period of military government and constitutional investigation; the Quebec Act; the new factor—the English-speaking settlers; the Constitutional Act, the struggle for self-government; rebellion, Durham, the Act of Union, parliamentary government; federation, the interpretation and working of the British North America Act, recent developments.

Books. KENNEDY, *Constitution of Canada*, and *Documents of Canadian Constitution*; SHORTT and DOUGHTY, *Canadian Constitutional Documents*, DOUGHTY and MCARTHUR, *Canadian Constitutional Documents*; KEITH *War Government in the Dominions*; LEFROY, *Canadian Constitutional Law*

4g. The Institutions of the modern British Empire: an advanced course on the subjects outlined in 4c.

4h. A Special Subject (continued from the Third Year).

### SPECIAL SUBJECTS

See 3g and 4h. The following subjects, of which one shall be chosen, are offered for 1925-26:

(1) England at the close of the Middle Ages. A study of town and country life in fifteenth century England, based as far as possible on contemporary sources including: *The Chronicles of London* (ed. Kingsford) *The Historical Collections of a London Citizen* (ed. Gairdner); *The Record of the Borough of Leicester* (ed. Bateson), *The Cely Papers* (ed. Malden) *The Paston Letters* (ed. Gairdner), *The Plumpton Correspondence* (ed. Stapleton); and *The Stonor Letters and Papers* (ed. Kingsford).

(2) Elizabethan parochial life and administration. A study of Elizabethan local life based as far as possible on original authorities including FRERE AND KENNEDY, *Visitation Articles and Injunctions* (Vols i and iii) W. P. M. KENNEDY, *Elizabethan Administration* (3 vols.); CARDWELL *Documentary Annals* (2 vols.), *Synodalia* (2 vols); HALE, *Precedent against Churchwardens*, *Precedents in Criminal Causes* . . . 1475-1604 LAMBARD, *Ecclesiastica*, GEE and HARDY, *Documents*; WILKINS, *Concilia Social Tracts* (from ARBER'S *English Garner*, 1904), HARRISON, *Description of England* (ed. Furnivall); BARNES, *Ecclesiastical Proceedings* (Surtree Society).

(3) The American Revolution. A course based on the following original authorities MORISON, *The American Revolution, Sources and Documents* ALLEN JOHNSON, *Readings in American Constitutional History*; TYLER *Literary History of the American Revolution* (2 vols.), WRAXALL, *Historical Memoirs of our own Times*, RAYMOND (Editor), *The Winslow Papers* CURWEN, *Journals and Letters 1775-1784*; BURKE, *Speeches on America*.

(4) Lord Durham's Report on the Affairs of British North America. A study in imperial politics based upon original authorities. *Lord Durham's Report* (ed. Lucas); KENNEDY, *Documents o*

the *Canadian Constitution*; EGERTON AND GRANT, *Canadian Constitutional Development*; Lady Durham's *Journal*; STUART REID, *Life and Letters of the first Earl of Durham*; FAWCETT, *Life of Molesworth*; MOLESWORTH, *Selected Speeches*; GARNET, *Life of Wakefield*; WAKEFIELD, *The Art of Colonisation, The Creevey Papers*; CHISHOLM, *Speeches and Public Letters of Joseph Howe*; C. W. ROBINSON, *Life of J. B. Robinson*; J. B. ROBINSON, *Canada and the Canada Bill*.

(5) The Revolutions of 1848. A study of the movements of 1848-9 in France and Germany, to be based as much as possible on original sources, such as Documents in Postgate, *Revolution*, and ANDERSON, *Constitutions and Documents, France*; for France, L. BLANC, *L'Organisation du Travail*; histories of the revolution by L. Blanc and Lamartine; TOCQUEVILLE, *Recollections*; STERN, *Histoire de la révolution de 1848*; NORMANBY, *A Year in France*; for Germany, KLEIN, 1848, *Der Vorkampf*; LEGGE, *Rhyme and Revolution in Germany*; SCHURZ, *Reminiscences*, vol. i, METTERNICH, *Mémoires*, MARX, *Revolution and Reaction in Germany and Austria*.

(6) Representative Government. The working of representative government in Great Britain, the United States, France, and Switzerland; the principles of the new constitution of India, the theory of representative government; special problems of modern democracy, such as electoral systems, direct government, the influence of political parties, parliamentary procedure, and the form of second chambers. The course will be based on the study of constitutional documents and parliamentary papers.

## POLITICAL ECONOMY

J. MAYOR, Ph.D.	.....	Professor Emeritus.
R. M. MACIVER, M.A., D.Phil.	.....	Professor.
C. R. FAY, M.A., D.Sc.	.....	Professor of Economic History.
W. JACKMAN, M.A.	.....	Associate Professor of Rural Economics.
G. E. JACKSON, B.A.	.....	Associate Professor.
H. A. INNIS, M.A., Ph.D.	.....	Assistant Professor.
H. R. KEMP, M.A.	.....	Lecturer.
V. W. BLADEN, B.A.	.....	Lecturer.
A. BRADY, B.A.	.....	Lecturer.
W. P. M. KENNEDY, M.A., Litt D.	.....	Special Lecturer in Mediaeval Economics.
W. S. FERGUSON	.....	Lecturer in Accounting.

1a. Economic Geography. The course attempts in a general outline to estimate the significance of geographic conditions (geological formations, physical features, climate) as factors in the development of modern civilization. Consideration will be given to the inter-relationship between these conditions and the movements of population, the state of the industrial arts, and the concomitant institutional fabric. With this background

attention will be paid to the direction, extent, and character of modern movements. Among the books which will be found useful in whole or in part are the following: NEWBIGIN, *Modern Geography*, NEWBIGIN, *Commercial Geography*, HUNTINGTON AND WILLIAMS, *Business Geography*; HUNTINGTON AND CUSHING, *Principles of Human Geography*; SMITH, *World's Food Resources*; SMITH, *Industrial and Commercial Geography*; DAY, *History of Commerce*; GRAS, *Introduction to Economic History*; BRUNHES, *Human Geography*, FINCH AND BAKER, *Geography of the World's Agriculture*; WHITBECK AND FINCH, *Economic Geography*, CHISHOLM, *Handbook of Commercial Geography*; MCFARLANE, *Economic Geography*, BROWN, *Principles of Economic Geography*; MILLER, *Some Great Commodities*

1b. Social Science. This course forms an introduction to Social Evolution. The following topics are included: (1) Primitive society: types and stages of culture. (2) The extension of man's power over the forces and materials of nature. (3) The development of tools and machinery, division and organization of labour. (4) The organization of knowledge; the development of institutions; historical outline of education, law, government. Books recommended: MARETT, *Anthropology*; LOWIE, *Primitive Society*; GOLDENWEISER, *Ancient Civilization*; MÜLLER-LYER, *History of Social Development*, MACIVER, *Community*

1c. Economic Geography. This course deals with the significance of geographic characteristics in the development of modern civilization, with special reference to Canada. Among the books which will be found useful in whole or in part are the following: *Canada Year Book* and other publications of the Dominion Bureau of Statistics, also publications of the Natural Resources Intelligence Service, and other Government departments, especially GRIFFIN, *Canada, the Country of the 20th Century* and *Canada, Natural Resources and Commerce*, *Handbook of Canada*; COLBY, *Readings in Economic Geography of North America*; *Annals of the American Academy of Political and Social Science*, May 1923; STANFORD, *Compendium of Geography of North America*, Vol. I

2a. Principles of Economics. The following books will be found useful: TAUSSIG, *Principles of Economics*; PIERSON, *Principles of Economics*; MARSHALL, *Principles of Economics*, MILL, *Principles of Political Economy*; ADAM SMITH, *Wealth of Nations*; WICKSTEED, *Common Sense of Political Economy*; CASSEL, *Nature and Necessity of Interest*; SMART, *Distribution of Income*; CARVER, *Distribution of Wealth*; HENDERSON, *Supply and Demand*; HOBSON, *Evolution of Modern Capitalism*; LAYTON, *Introduction to the Study of Prices*. Three hours a week.

2b. Economic History. British Economic History from the middle ages to the present day, with special reference to the period from 1760 onwards; Books recommended: ASHLEY, *Economic Organization of England*; REES, *Fiscal and Financial History of England, 1815-1918*, KNOWLES, *Industrial and Commercial Revolutions in Great Britain during the 19th Century*;

FAY, *Life and Labour in the 19th Century*, BUXTON, *Finance and Politics*; PROTHERO, *English Farming Past and Present*, JACKMAN, *Transportation in Modern England*, ANDREADES, *History of the Bank of England*, DICEY, *Law and Opinion in England*, WEBB, *History of Trade Unionism*; BLAND, BROWN AND TAWNEY, *English Economic History, Select Documents*; ADAM SMITH, *Wealth of Nations* (Book IV). Three hours a week.

2c. Structure of Modern Industry and Commerce. (1) Distribution of population and natural resources. Localization of industry. (2) Survey of the economic field (production, distribution, transport and exchange). Relation between industry and commerce. (3) Characteristics of modern industry. Economies of large-scale organization. Limiting factors in agriculture. (4) Markets and marketing. Producers' co-operation. (5) Competition and combination. The trust movement. Public ownership. Consumers' co-operation. Books recommended: TAUSSIG, *Principles of Economics*; MARSHALL, *Industry and Trade*; LEVY, *Monopoly and Competition*, FAY, *Co-operation at Home and Abroad*. Three hours a week.

2d. Economic History and Theory with special reference to the eighteenth and nineteenth centuries. Books recommended for study: CLAY, *Economics for the General Reader*; GIBBINS, *Industry in England*, TOYNBEE, *Industrial Revolution*, WEBB, *History of Trade Unionism in England*; HOBSON, *Evolution of Modern Capitalism*; ADAM SMITH, *Wealth of Nations*; BLAND, BROWN AND TAWNEY, *English Economic History, Select Documents*; DICKENS, *Hard Times*; DISRAELI, *Sybil*. One hour a week.

2e. General Introduction to the Study of Economics. For pass students. Elements of Economic Theory, Sketch of Economic History, and of important social changes and movements. Books recommended: TAUSSIG, *Principles of Political Economy*; HENDERSON, *Supply and Demand*, ROBERTSON, *Control of Industry*, WITHERS, *Meaning of Money*. Two hours a week.

3a. Labour Problems. A comparative study, with special reference to Canada, U.S.A., Australia and Great Britain. Population and Land Settlement. Labour in politics. Co-operation. Trade Unionism. Arbitration and Conciliation. Wage Boards and the Minimum Wage. Co-partnership and Profit-Sharing. Books recommended: *Social and Economic Conditions in the Dominion of Canada*, edited by KENNEDY (Annals of American Academy, May 1923), Parts I and VIII; *The Labour Gazette* (Canada); FAIRCHILD, *Immigration*; MEREDITH ATKINSON, *Australia, Economic and Political Studies*, WEBB, *History of Trade Unionism*; FAY, *Co-partnership in Industry*. One hour a week.

3b. Money, Credit and Prices. A course dealing with international trade and monetary theory, the gold standard, Canadian finance in war-time; banking systems; the business cycle; and the problem of reparations. Books recommended: FOSTER AND CATCHINGS, *Money*; FISHER, *The Purchasing Power of Money*; HAWTREY, *Currency and Credit*, MARSHALL,

*Money, Credit and Commerce*; VINER, *Canada's Balance of International Indebtedness*; DE LAUNAY, *The World's Gold*; LEHFELDT, *Gold and the Witwatersrand*; WITHERS, *The English Banking System*; PALGRAVE, *Bank Rate and the Money Market*; WILLIS, *The Federal Reserve System*; JOHNSON, *The Canadian Banking System*; MITCHELL, *Business Cycles*; LAVINGTON, *The Trade Cycle*; MOORE, *Generating Economic Cycles*; *Business Cycles and Unemployment*; KEYNES, *Economic Consequences of the Peace*; MOULTON AND MAGUIRE, *Germany's Capacity to Pay*; *Report of the Dawes Commission*; CASSEL, *Money and Foreign Exchange after 1914*; KEYNES, *Monetary Reform*; LLOYD, *Stabilization*. Three hours a week.

3c. Statistics. General introduction to the use of statistics, methods of collection, tabulation, graphic presentation, analysis, and interpretation, and application to the study of business cycles, population, and other economic problems. Survey of some of the principal sources of statistical information. A considerable part of the course will be devoted to laboratory work. Books recommended: RIEGEL, *Elements of Business Statistics*; SECRIST, *Manual of Statistical Methods*; KING, *Elements of Statistical Method*; YULE, *Introduction to the Theory of Statistics*; BOWLEY, *Introductory Manual of Statistics and Elements of Statistics*; FORSYTH, *Mathematical Analysis of Statistics*; KELLEY, *Statistical Method*; FISHER, *Making of Index Numbers*; MITCHELL, *Index Numbers of Wholesale Prices in the United States and Foreign Countries* (Bulletin 284 of U.S. Bureau of Labour Statistics), *Labour Gazette* (Ottawa), *Canada Year Book*, *Census Reports of Canada*, *Great Britain*, *U.S.A.*, publications of the Royal Statistical Society and the American Statistical Association, and other publications to be indicated from time to time. Three hours a week.

3d. Public Finance and Administration. Economic functions of the state; principles and incidence of taxation; national and local finance, public debts and their redemption; revenue systems of modern states, central and local administration. Books recommended: LUTZ, *Public Finance*; BASTABLE, *Public Finance*; PLEHN, *Public Finance*; COEN, *Science of Finance*; BULLOCK, *Selected Readings in Public Finance*; SELIGMAN, *Essays in Taxation*, *Incidence of Taxation*, *The Income Tax*, *Progressive Taxation*; KENNAN, *Income Taxation*; PLEHN, *The Property Tax in California*; MAYOR, *Taxation of Banks in Canada*, *Taxation of Corporations in Canada*; VINEBERG, *Dominion and Provincial Taxation in Canada*; GRICE, *National and Local Finance*; LOWELL, *Government of England*; REDLICH AND HURST, *Local Government in England*; VILLARD AND WILDOUGHBY, *Canadian Budgetary System*. Three hours a week.

3e. Economic Theory. Books recommended: ADAM SMITH, *Wealth of Nations*; MALTHUS, *Essay on Population*; RICARDO, *Political Economy*; MARX AND ENGELS, *The Communist Manifesto*; GIDE AND RIST, *History of Economic Doctrines*; DAVENPORT, *Value and Distribution*; LEVINSKY, *The Founders of Political Economy*, SPARGO, *Socialism*. Three hours a week.

3f. Economic Theory. An introductory course for Honour students in Philosophy. Two hours a week.

4a. Advanced Economic Theory. A course dealing with the evolution of economic thought through the principal schools from the Physiocrats to the present, and giving special attention to the criticism of current theories of value, interest, rent, and wages. Books recommended: ADAM SMITH, *Wealth of Nations*, MALTHUS, *Essay on Population*; RICARDO, *Principles of Political Economy*; J. S. MILL, *Principles of Political Economy*; MARX, *Capital*; BÖHM-BAWERT, *Capital and Interest*, and *The Positive Theory of Capital*; MARSHALL, *Principles of Economics*, and *Industry and Trade*; CANNAN, *Theories of Production and Distribution*, HOBSON, *Economics of Distribution*; J. B. CLARK, *Distribution of Wealth*, DALTON, *Inequalities of Income*, HANEY, *History of Economic Thought*, GIDE AND RIST, *History of Economic Doctrines*. Three hours a week.

4b. Transportation. Railway accounts and rates; principles of rate making as established by the railways, the regulative tribunals and the courts, railway policy in Canada and the other chief countries; railway rate structures, organization of ocean commerce, ocean freight-rates; shipping conferences and their results; relations of ocean and land transportation interests, inland water transportation; highway transportation. Books recommended: BROWN, *Transportation Rates and their Regulation*; JOHNSON AND VAN METRE, *Principles of Railroad Transportation*, HANEY, *The Business of Railway Transportation*, JONES, *Principles of Railway Transportation*, JOHNSON AND HUEBNER, *Principles of Ocean Transportation*. Two hours a week.

4c. Corporation Finance. Economic services of corporations; capitalization; detailed study of stocks and bonds; financing of extensions and improvements; management of incomes and reserves; dividend policy; insolvency, receiverships, reorganizations. Books recommended: MEAD, *Corporation Finance*; GERSTENBERG, *Financial Organization and Management*, CONYNGTON, *Financing an Enterprise*; LOUGH, *Business Finance*, DAGGETT, *Railroad Reorganizations*, DEWING, *Corporate Promotions and Reorganizations*, GERSTENBERG, *Materials of Corporation Finance*. Two hours a week.

4d. Economic History of Canada and the United States. The course is an attempt to estimate the significance of economic factors in the growth of western civilization on the North American continent. Three hours a week. This course will not be given during the session 1925-26.

4e. Political Theory. A study of the nature, functions, institutions, and limits of the modern state, led up to by a comparative study of political evolution. Books recommended: HOBBS, *Leviathan*; LOCKE, *On Civil Government*; ROUSSEAU, *Social Contract*; SIDGWICK, *Elements of Politics*; BARKER, *Political Thought from Spencer to the Present Day*, LASKI, *Studies*

in the *Problems of Sovereignty; Authority in the Modern State*; DUGUIT, *The Law and the State*, JENKS, *The State and the Nation*; OPPENHEIMER, *The State*, OSTROGORSKI, *Democracy and the Organization of Political Parties*, LOWELL, *Public Opinion and Popular Government*; GOODNOW, *Principles of Constitutional Government*, McBAIN AND ROGERS, *The New Constitutions of Europe*, BRYCE, *Modern Democracies*. Two hours a week.

4f. Rural Economics. A study of rural interests from the standpoint of economic principles; the economy of land, labour and capital in agriculture; the problems of ownership and tenancy; rural credits; transportation in its vital relation to agriculture; the problems of marketing farm products, principles underlying the proper adjustment of rural and urban industries; rural social economy. Books recommended. Publications of the International Institute of Agriculture; reports of government and educational institutions dealing with important phases and problems of agriculture in Canada, England and United States, NOURSE, *Agricultural Economics*; FAY, *Cooperation at Home and Abroad*, DUNCAN, *Marketing, its Problems and Methods*; CHERINGTON, *The Elements of Marketing*; HERRICK, *Rural Credits*, MORMAN, *Farm Credits in the United States and Canada*, CARVER, *Principles of Rural Economics*. Two hours a week.

4g. Business Administration. Special lectures by experts on aspects and methods of business administration. The subjects will be arranged under the following heads: (1) financial control, (2) home and export marketing, (3) personnel administration. One hour a week.

4h. A General Sketch of Economic History. For pass students. Books recommended: ASHLEY, *Economic Organisation of England*; KNOWLES, *Industrial and Commercial Revolutions in Great Britain during the 19th Century*; FAY, *Life and Labour in the 19th Century*, BOGART, *Economic History of the United States*. Three hours a week.

4i. Special Subject:—

Owing to the transference of Economic History (2b) from the fourth to the second year of the course, there will be no special subject for the year 1925-6, course 2b being substituted therefor.

## LAW

J. F. DAVISON, B.A., LL.M . . . . . *Temporary Lecturer in Roman Law and Jurisprudence*  
 A. R. CLUTE, B.A., LL.B. . . . . *Lecturer*  
 H. W. A. FOSTER, LL.B. . . . . *Lecturer*  
 W. P. M. KENNEDY, M.A., LITT.D. *Special Lecturer in Federal Constitutions.*

3a. History of English Law Anglo-Saxon Customs and Dooms. The Norman century; feudal tenures and Church Courts Reforms of Henry II. Foundation of the Common Law: writs and jury-trial. Legislation



of Edward I. Expansion of the Common Law, growth from Writ of Trespass Equity. Development by legislation and decisions. Struggle between Chancery and Common Law Courts in the reign of James I. Reform by Equity. Legislation and Common Law before the Reform Bill period. Rigidity of the Equity system. Progress by legislation in England and Ontario. For reference MAITLAND AND MONTAGUE, *A Sketch of English Legal History*, POLLOCK AND MAITLAND, *History of English Law* (Book I), HOLDSWORTH, *A History of English Law*, JENKS, *Short History of English Law*. One hour a week.

3b. Roman Law. Principles of Roman Law and of the Civil Law and Modern Codes as developments thereof—an introduction to Comparative Law. Compilation of Texts furnished. Two hours a week and seminary.

3c. A course in English Constitutional Law, in which the distinctive features of the English Constitution, the Rule of Law and the Sovereignty of Parliament, the two Houses of Parliament, the Cabinet and the relation to the Crown and Parliament, the prerogative, the conventions, the Courts, and the position of the subject under English law, are the principal topics. Students are recommended to read: DICEY, *Law of the Constitution*, ANSON, *Law and Custom of the Constitution*, THOMAS, *Leading Constitutional Cases*; LOW, *Governance of England*; MARRIOTT, *English Political Institutions*; RIDGE, *Constitutional Law*. One hour a week, Michaelmas term.

3d. A course in Colonial Constitutional Law, in which the lectures deal with the various forms of colonial government with special reference to the self-governing colonies and to current problems. Students are recommended to read: TODD, *Parliamentary Government in the Colonies* (to page 318); "Introduction" to DICEY, *Law of the Constitution* (8th ed., 1915), pp. xiv to xxvii; c. 2, pp. 98-116, and either TARRING, *Law in Relation to the Colonies*, JENKYNs, *British Rule and Jurisdiction beyond the Seas*; or the Section on Colonies and Dependencies in HALSBURY, *Laws of England*. One hour a week, Easter term.

4a. A course in Canadian Constitutional Law, with special reference to the distribution of legislative and executive powers between the Dominion and the Provinces. Text-books: CLEMENT, *Law of the Canadian Constitution* (3rd ed., 1916), Part II; LEFROY, *Short Treatise on Canadian Constitutional Law*. For reference. LEFROY, *Legislative Power in Canada*; LEFROY, *Leading Cases*, and Reported Cases to which the student may be referred by lecturer.

4b. A course in Federal Institutions. The lectures deal comparatively with the essential features of federal and semi-federal government. Special attention is given to the constitutions of Canada, Australia, South Africa, the United States, Switzerland, and the Irish Free State. Books recommended for reading: KENNEDY, *Law and the Development of the Canadian Constitution*; BRYCE, *American Commonwealth* (last edition); WILSON, *Congressional Government*, TAFT, *Our Chief Magistrate*; HAINES, *The*

*American Doctrine of Judicial Supremacy*; BALDWIN, *The American Judiciary*; MOORE, *The Commonwealth of Australia* (second edition), QUICK, *Legislative Power in Australia*; VINCENT, *The Government of Switzerland*; BROOKS, *The Government and Politics of Switzerland*, HIGHT AND BAMFORD, *The Constitutional History and Law of New Zealand*, FIGGIS, *The Free State Constitution*. One hour a week.

4c. Jurisprudence. Theory of Law and Legislation, the Province of the Written and Unwritten Law. Problems of Law Reform. Outline of Lectures and Assigned Readings provided. Two hours a week and seminary.

4d. International Law. 1 The nature, history and sources of international law. 2 The subjects of international law: the notion of sovereignty and the classification of states, the origin, continuity and extinction of states, the independence of states, self-preservation and intervention; the equality of states, the system of Europe and the Monroe Doctrine. 3. The objects of international law: territorial sovereignty and state territory; modes of acquiring territory; territorial, boundary and international waters, the open sea; jurisdiction; nationality and alienage. 4. International intercourse; international agents; treaties, negotiation, mediation and arbitration; forcible measures short of war. 5. War: general notions; immediate legal effect; enemy character of persons, rule of non-intercourse; laws of war with regard to enemy persons; enemy character of property and laws of war with regard to property; military occupation; enemy merchantmen, their crews and cargoes; prize courts; instruments and methods of naval warfare; non-hostile intercourse of belligerents. 6. Neutrality. nature and history; violation and cessation, neutralization, the obligations of a neutral state; the duties of prevention, abstention and impartiality; the rights of a neutral state; inviolability of territory, right of asylum, right of commerce; nationals of neutral state subject to state law and to rights of belligerent states, visit and search; contraband of war; blockade; unneutral service. 7. For reference: (1) general treatises: HALL, WESTLAKE, LAWRENCE, OPPENHEIM, (2) cases and documents: MOORE, COBBETT, SCOTT, WHITTUCK, LAWRENCE, EVANS, (3) prize court decisions, official documents relating to the late war and Covenant of the League of Nations. One hour a week.

4e. Commercial Law: General principles of the law of contracts. Rules relating to parties to contract; agency, partnership and companies. General view of the following: sale of goods, negotiable instruments, powers of banks, relation of banker and customer, insurance, carriage of goods, suretyship and guarantee, bills of sale and chattel mortgages, bankruptcy and insolvency. Text-book: STEVENS, *Elements of Mercantile Law* (6 ed., 1920, by H. Jacobs). A larger book of a general character is SMITH, *Mercantile Law*. The lecturer will, if desired, refer students to special works on any of the foregoing topics. One hour a week.

4f. Commercial Law: A second course, an extension of Course 4e.

## PHILOSOPHY

## UNIVERSITY OF TORONTO:

J. G. HUME, A.M., Ph.D.	.....	<i>Professor of History of Philosophy.</i>
G. S. BRETT, M.A.	.....	<i>Professor.</i>
T. R. ROBINSON, Ph.D.	.....	<i>Associate Professor.</i>
F. H. ANDERSON, Ph.D.	.....	<i>Lecturer.</i>

## UNIVERSITY COLLEGE:

F. TRACY, B.A., Ph.D.	.....	<i>Professor of Ethics.</i>
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## VICTORIA COLLEGE:

W. B. LANE, M.A., Ph.D.	.....	<i>Professor of Ethics.</i>
W. T. BROWN, M.A., Ph.D.	.....	<i>Professor of Ethics.</i>

## TRINITY COLLEGE:

REV. G. F. KINGSTON, B.D., Ph.D.	.....	<i>Associate Professor of Ethics</i>
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## ST. MICHAEL'S COLLEGE:

REV. D. CUSHING, LL.D.	.....	<i>Professor Emeritus.</i>
REV. H. CARR, B.A., LL.D.	.....	<i>Professor of History of Philosophy.</i>
SIR BERTRAM C. A. WINDLE, M.A., Ph.D., M.D., Sc.D., LL.D., F.R.S.	.....	<i>Professor of Anthropology.</i>
REV. E. J. MCCORMICK, M.A.	.....	<i>Professor of Social Ethics.</i>
REV. H. S. BELLISLE, M.A.	.....	<i>Professor of Logic.</i>
M. DEWULF, Ph.D., LL.D.	.....	<i>Professor of Mediaeval Philosophy.</i>
REV. A. E. HURLEY, S.T.L.	.....	<i>Professor of Theodicy</i>
REV. W. J. ROACH, B.A.	.....	<i>Professor of Ethics.</i>
REV. F. D. MEADER, B.A.	.....	<i>Professor of Ethics (Ob).</i>
REV. B. SULLIVAN, M.A.	.....	<i>Lecturer in Social Ethics.</i>

## PASS COURSES

- 2a. Introductory Course. (i) Logic. A course on the place and function of Reason in experience according to (a) the biological classification of functions, (b) the Aristotelian method, (c) idealistic construction of experience, the status of the Person in relation to Nature and Society (typical historical views); common sense and the conditions of scientific method. the basal concepts of the natural sciences, law, cause and effect, space, time, evolution; the distinction between normative and descriptive sciences; analysis of the validity and utility of this distinction in reference to the problem of social values and their objectivity Two hours a week.
- (ii) Introduction to Ethics. One hour a week.

3a. Social Ethics. The study of social conditions and problems in their ethical aspects (1) History of moral ideas and customs, the process of ethical development in early society; Greek ethics, with special reference to the social and political ethics of Plato and Aristotle, and including the later Greek systems (Stoic and Epicurean), the influence on world civilization of Greek, Hebrew, Roman and early Christian moral and social ideals. (2) Theory of morals; the leading problems of moral philosophy and typical proposed solutions. (3) Social problems; the ethical aspects of modern economic, political and social conditions. Prescribed texts: SETH, *Ethical Principles*, selections from PLATO, *Republic*, ARISTOTLE, *Nicomachean Ethics and Politics*. References: DEWEY AND TUFTS, *Ethics*, DRAKE, *Problems of Conduct*, BAKEWELL, *Source Book in Ancient Philosophy*; MYERS, *History as Past Ethics*, ROGERS, *Short History of Ethics*, TOWNE, *Social Problems*. Three hours a week.

3b. History of Philosophy. Primitive thought and the origins of western civilization; the early Greek schools and the relations between philosophy and science, the Sophists and the growth of humanism; Socrates and the Greek Enlightenment, the constructive philosophy of Plato; the philosophy of Aristotle; criticism in the classical period, the Aristotelian theory of tragedy, the later schools of Hellenism (Stoic, Epicurean, Sceptic) Texts. PLATO, *Republic*, ARISTOTLE, *Ethics*. References: GOMPERZ, T, *Greek Thinkers*, 1, BURNER, J, *Greek Philosophy*, ADAMSON, R., *Development of Greek Philosophy*, HICKS, R. D., *Stoic and Epicurean*. Three hours a week.

3c. Logic. A course on the principles of scientific method as developed in the eighteenth century and applied to problems of life and mind. Special emphasis will be laid on the development of naturalism and empiricism as illustrated by the application of these views in the analysis of mind and the treatment of social relations (NOTE.—This course connects the Logic of the Second Year with the Psychology offered for students in Economics in the Third and Fourth Years. It is essential for entrance to those courses.) References: MILL, J.S., *Logic*, Book VI. Readings from BACON and HUME will be selected. Three hours per week for one term.

4a. Modern Ethics. The lectures will be (a) Historical, tracing the rise and development of the leading problems of ethics, and the formation of the chief schools and systems, Hedonist, Intuitionist, etc.; (b) Expository and critical. The following texts will be studied in the class, and their doctrines examined: HOBBS, *Leviathan*; HUME, *Enquiry concerning the Principles of Morals*, with Appendices; J. S. MILL, *Utilitarianism*; SPENCER, *Data of Ethics*; J. G. HUME, *Young's Ethics of Freedom*, GREEN, *Prolegomena to Ethics*. Three hours a week.

4b. History of Philosophy. History of the problems of Modern Philosophy with special reference to British Philosophy. References: SETH, *English Philosophers and Philosophical Schools*; CALKINS, *The Persistent*

*Problems of Philosophy*; CUSHMAN, *History of Philosophy*, Vol. II; RAND, *Classical Philosophers*; A. D. LINDSAY, *Kant*, M. M. WADDINGTON, *The Development of British Thought*. Three hours a week.

#### HONOUR COURSES

1a. Ethics. Introductory Course Studies in character, conduct and moral values. Prescribed text: JOHNSON, *An Introduction to Ethics*. Two hours a week.

2b. Ethics. Elementary Course Outline study of the subject matter and method of Ethics, with its leading problems and schools. Ethical development among the Hebrews, Greeks and Romans. Prescribed texts. MACKENZIE, *Manual of Ethics*; Selections from the Old Testament; PLATO, *Republic*; ARISTOTLE, *Nicomachean Ethics*; CICERO, *De Finibus*, and from other Greek and Roman writers, as given in BAKEWELL, *Source Book in Ancient Philosophy*. References: ROGERS, *Short History of Ethics*; MUIRHEAD, *Elements of Ethics*; SETH, *Ethical Principles*; DEWEY AND TUFTS, *Ethics*, WATSON, *Hedonistic Theories*, SMITH, *The Moral Life of the Hebrew People*. Two hours a week.

2c. Logic. Introductory Course (i) Historical development of logic; primitive views of nature and the concept of order; the use of the sciences; the Greek view of objects and their relations, the criticism of knowledge and the psychological analysis of experience; the principles of systematic philosophy as stated by Plato and Aristotle. (ii) Elements of inductive logic; modern concepts of method and the categories of the sciences. Texts PLATO, *Theatetus*, ARISTOTLE, *Organon* (Selections); CREIGHTON, *Introductory Logic*. Two hours a week.

2d. History of Philosophy. Texts: LOCKE, *Essay on the Human Understanding* BERKELEY, *Principles of Knowledge*. Two hours a week.

3d. Ethics. English Ethics from Hobbes to Spencer, with special attention to the Ethics of Naturalism. Exposition and criticism of Hedonism, Utilitarianism, and Evolutionism, in relation to the general trend of English thought and life in the period covered. Prescribed texts: HOBBS, *Leviathan*, HUME, *Enquiry concerning the Principles of Morals*; MILL, *Utilitarianism*; SPENCER, *Data of Ethics*; together with other selections, from RAND, *Classical Moralists*, or SELBY-BIGGE, *British moralists*. References: ALBER, *History of English Utilitarianism*; WATSON, *Hedonistic Theories*; SORLEY, *The Ethics of Naturalism*; MARTINEAU, *Types of Ethical Theory*; RASHDALL, *Theory of Good and Evil*. Two hours a week.

3e. History of Philosophy. Modern Philosophy. (a) The rationalistic school; selections from Des-Cartes, Spinoza, Leibnitz. (b) The empirical school; selections from Hume, Mill, Spencer, James. Two hours a week.

3f. Logic. (1) Development of systematic thought after Aristotic as shown in the Stoic, Epicurean and Neo-Platonic systems; the later history of Greek philosophy and the origin of mediaeval thought; the influence of

the Arabic schools; the old traditions and the new sciences, the work of Francis Bacon (2) The progress of the sciences and the applications of scientific method in theories of nature and society during the eighteenth century Texts. BACON, *Novum Organum and Advancement of Learning*, J. S. MILL, *A System of Logic*, HOBHOUSE, *Theory of Knowledge*. Two hours a week.

4c. Ethics. Rationalism and Idealism Exposition and criticism of the Ethics of Kant and T. H. Green. Discussion of selected problems in Ethics Prescribed texts KANT, *Groundwork of the Metaphysic of Ethics*, and *Critique of Practical Reason*; GREEN, *Prolegomena to Ethics*. References CAIRD, *The Critical Philosophy of Kant*, WATSON, *The Philosophy of Kant Explained*. Two hours a week.

4d. Social Ethics. (1) The evolution of society; philosophy of social progress, its nature and the forces directing it. (2) Theories of the mutual relation of the state and the individual, grounds of political obligation. (3) Modern social conditions and problems References GREEN, *Principles of Political Obligation*, TODD, *Theories of Social Progress*; PARK AND BURGESS, *Introduction to the Science of Sociology*; ELWOOD, *Sociology and Modern Social Problems*; OGG, *Social Progress in Contemporary Europe*. Two hours a week

4e. History of Philosophy. Kant and his successors. Text: KANT, *Critique of Pure Reason* Two hours a week

4f. Logic. Studies in logic and theory of knowledge based on recent expositions Seminar. One hour a week

4g. Systematic Philosophy. A course of lectures on the varieties of philosophical thought in the nineteenth century with special reference to the scientific and social factors in the construction of systems; this course includes the Romantic movement in Germany, Positivism, the rise of the psychological sciences and their relation to philosophy (Wundt, Darwin, Spencer), the present tendencies and movements Texts A text for special study may be offered by the student, subject to approval References MERZ, *A History of European Thought in the Nineteenth Century*, ROGERS, *British and American Thought since 1800*, PERRY, *Present Philosophical Tendencies*.

5. Selected texts. Students who elect this option will be required to study one or more selected texts approved by the Department. The work is done under the direction of the staff, but formal instruction is not necessarily provided.

## ST. MICHAEL'S COLLEGE

### PASS COURSES

2e Logic. The standpoint and problem of Logic; important stages in the development of Logic; the syllogism, the problem of induction; assumptions of induction; the laws of thought; types of judgment; nature of inference; science and philosophy, philosophy as the interpretation of the sciences.

3f (1) General Philosophy. Modern physical and chemical views in relation to the conception of matter and form, the uniformity of the Universe and the orderliness of Nature; proofs of the existence of God, the argument from design. Two hours a week.

3f (2). Psychology. An introductory course. A study of common human experiences presenting the main problems of Psychology; various fields of consciousness and methods of study: normal, human, adult psychology. Prescribed texts: MAHER, *Psychology*, Part I; Manuals by BRESEK, DUBRAY and MERCIER.

3g. (1) An introduction to Moral Philosophy; various theories of the moral ideal, relation of freedom and morality; the problem of duty, the virtues.

3g. (2) An introduction to Logic. Logic defined by its problems; the place of logic in the hierarchy of the sciences, important stages in the development of logic, inference, deductive and inductive; philosophy as the interpretation of the sciences

3h General Ethics. An analysis of the idea of the Good with a criticism of the various theories; the problem of Duty; the Virtues; Natural Law, Rights. Prescribed texts: CRONIN, *Science of Ethics*, Vol. I, RICKABY, *Moral Philosophy*. Three hours a week.

4g (1) General Philosophy. The cell and cellular life; Bio- and Abiogenesis; development, vegetable and animal kingdoms; vitalism, Geology and early man; races of mankind; transformism; the origin of man. Two hours a week.

4g (2). Metaphysics. The nature and need of Metaphysics, the notion of Being; essence and existence; unity, truth, and goodness of Being; the possibilities of Being; theodicy, substance and accident; personality, causality; relation, space, and time. Two hours a week.

4g (3). Psychology. A study of the nature of the human mind; the mind-body relation; psychical research. Texts: MAHER, *Psychology*, Part II; BARRET, *Psychical Research*; McDUGALL, *Mind and Body*. Two hours a week.

4h. Same as 3g.

4s. Social Ethics. A course of lectures on Social Reconstruction. Theory of Social Reform—Socialism and Labour Movement as types of reform activity. Readings: RYAN, *Social Reconstruction*; RYAN AND HUSSEIN, *The Church and Labour*; RYAN AND MILLER, *The Church and State*; MCLEAN, *The Morality of the Strike*.

#### HONOUR COURSES

1b. Genetic Psychology. Growth and Development. Methods of Learning. Experience Education. Two hours a week.

2f. Introduction to Philosophy. Prescribed texts: M. DE WULF,

*History of Medieval Philosophy*, PLATO, *Republic*; ARISTOTLE, *Politics*; CICERO, *De Finibus*; Encyclopedia articles. Three hours a week during the Michaelmas term.

2g. An outline of Greek philosophic thought. Three hours a week during the Easter term.

2h. Logic. The standpoint and problem of Logic, important stages in the development of Logic; the syllogism, the problem of induction, assumptions of induction; the laws of thought; types of judgment; nature of inference; science and philosophy, philosophy as the interpretation of the sciences. Prescribed texts: BOSANQUET, *Essentials of Logic*; JOYCE, *Principles of Logic*; COFFEY, *Science of Logic*; BUTCHER, *Aspects of Greek Genius, Essay on the unity of Learning*.

2i. Seminar in Logic. Special problems arising from the reading of NEWMAN'S *Grammar of Assent*; ARISTOTLE'S *Organon*. One hour a week.

2j. Psychology. An introductory course. A study of common human experiences presenting the main problems of Psychology; various fields of consciousness and methods of study; normal, human, adult psychology. Prescribed texts: MAHER, *Psychology*, Part I; Manuals by BREESE, DUBRAY and MERCIER. Two hours a week.

2k. Social Psychology. Behaviour and action; theories of action. Reference: W. McDUGALL, *Social Psychology*. One hour a week.

2l. General Ethics. An analysis of the idea of the Good, with a criticism of the various theories; the problem of Duty; the Virtues; the Natural Law; Rights. Prescribed texts. CRONIN, *Science of Ethics*, Vol. I; RICKADY, *Aquinas Ethicus*, ROSS, *Christian Ethics*. Two hours a week.

3i. General Philosophy. Modern chemical and physical views in relation to the conception of Matter and Form, the uniformity of the Universe and the orderliness of Nature; proofs of the existence of God; the argument from design. Two hours a week.

3j. Logic. The problems of Epistemology, scepticism, positivism, dogmatism; exposition and criticism of each; knowledge and the external world; critical study of DESCARTES, LOCKE, HUME, BERKELEY, KANT from this viewpoint; the criteria of valid knowledge. One hour a week.

3k. Seminar in Logic. Discussion of the problems arising from the reading of BERKELEY, *Principles of Knowledge*, *Essay on the Human Understanding*. One hour a week.

3l. Metaphysics. The nature and need of Metaphysics; the notion of Being, essence and existence, unity, truth, and goodness of Being; the possibilities of Being; theodicy, substance and accident, personality; causality; relation, space and time. Two hours a week.

3m. Industrial Ethics. A course of lectures on the problems of distributive justice, natural justice and private property; rent; interest; profits; wages, the guild system; the morality of the strike; the Church and



Labour; the Church and the State; the Social Mission of Charity. Readings: CARLYLE, *Medieval Political Theory in the West*; CARVER, *The Distribution of Wealth*, J. A. RYAN, *Distributive Justice*; HENRY GEORGE, *Progress and Poverty*; HILQUIT-RYAN, *Socialism—Promise or Menace?*, RYAN, *The Living Wage*; PENTY, *A Guildsman's Interpretation of History*; BELLOC, *The Servile State*, ASHLEY, *Economic History*.

3n. Seminar in Social Ethics. Selected readings from PLATO, ARISTOTLE and ST. THOMAS.

3o. History of Mediæval Philosophy. Two hours a week

4j. General Philosophy. The cell and cellular life, Bio- and Abiogenesis; development, vegetable and animal kingdoms, vitalism, Geology and early man, races of mankind, transformism; the origin of man. Two hours a week.

4k. Epistemology. An investigation of the grounds of Certitude with special reference to HUME, KANT and J. S. MILL. One hour a week during the Michaelmas term.

4l. Contemporary Thought. Bergson, Croce, and British and American realists. One hour a week during the Easter term.

4m. Psychology. A study of the nature of the human mind; the mind-body relation, psychical research. Prescribed texts: MAHER, *Psychology*, Part II, Readings: BARRETT, *Psychical Research*; McDougall, *Mind and Body*. Two hours a week.

4n. Seminar in Psychology. The History of Psychology. References: MERCIER, *The Origin of Modern Psychology*; BRETT, *History of Psychology*.

4o. Social Ethics. A study of the social thought of the nineteenth century as reflected in the writings of MILL, BENTHAM, CARLYLE, NEWMAN, RUSKIN, HUXLEY, SPENCER, and T. H. GREEN.

4p. History of Modern Philosophy. Two hours a week

4q. St Augustine. Theory of knowledge, political thought, evolution. Readings. *The City of God*; *Confessions and Letters*; *De Genes ad Litteram*. References. FIGGUS, *Aspects of the Political Thought of St Augustine*, DORLODOT, *Darwinism and Catholic Thought*, ALLIES, *Formation of Christendom*

4r. A dissertation on some selected topic in Philosophy to be chosen by the student and approved by the department on or before November 1.

#### PSYCHOLOGY DEPARTMENT

1. Abnormal Psychology. Problem of the feeble-minded, school-life, adult life; intelligence tests as applied to children and their results; feeble-minded and their relation to society, relation of Psychiatry to Psychology, drugs and their effect; heredity as a factor in insanity; general outline of diseases of the mind; treatment of mental diseases in general, results, duty of the state as a factor; cause of the increase of mental diseases.

## PSYCHOLOGY

## UNIVERSITY OF TORONTO:

E. A. BOTT, B.A.	<i>Associate Professor and Director of Psychological Laboratory.</i>
E. D. MACPHER, M.A., B.EDUC.	<i>Assistant Professor</i>
W. E. BLATZ, M.A., M.B., PH.D.	<i>Assistant Professor.</i>
S. N. F. CHANT, M.A.	<i>Lecturer.</i>
G. G. BROWN, B.A.	<i>Class Assistant.</i>
MISS M. K. STRONG, M.A.	<i>Class Assistant.</i>
MISS J. E. DORAN	<i>Clinic Assistant (Michaelmas Term).</i>
MISS H. KEENS, B.A.	<i>Class Assistant (Easter Term).</i>

## ST. MICHAEL'S COLLEGE:

REV. M. J. OLIVER, PH.M.	<i>Professor</i>
V. A. McDONOUGH, M.B.	<i>Lecturer.</i>

## PASS COURSES

NOTE—Students in Pass and Honour courses (other than Biological and Medical Sciences) who take Psychology as a pass subject in the Second, Third and Fourth Years and who purpose at any time doing advanced work in Psychology are recommended to take course 2*d* instead of 2*a*, 3*c* instead of 3*a*, and 4*c* instead of 4*a*.

2*a*. Elementary Psychology. A course in fundamentals; lectures and demonstrations; exercises (2*f*). Three hours a week.

2*b*. Elementary Psychology. A course in general psychology for students of the Extension Department with special reference to the problems of Education. Two hours a week.

2*c*. Introductory Course for students of the Biological and Medical Sciences. Two hours a week.

3*a*. Principles and application of experimental psychology, lectures and laboratory (3*f*). Three hours a week.

3*b*. Introductory Psychology for students of Economics. Three hours a week. Easter term.

4*a*. Applied Psychology. A study of the methods and results of the applications of Psychology to practical problems. Three hours a week.

4*b*. Industrial Psychology. Psychological study of problems related to economics and industry. Three hours a week.

## HONOUR COURSES

2*d*. Introduction to Psychology with studies in specially selected topics. Four hours a week.

3*c*. Principles and application of experimental psychology, lectures, laboratory (3*f*), and studies in theory. Four hours a week.

4c. Applied Psychology. A study of the methods and results of the applications of Psychology to practical problems, with studies in special topics, historical and critical. Four hours a week.

4d. Genetic Psychology. Two hours a week.

4e. Psychology of the abnormal mental processes. Two hours a week.

#### COURSES IN THE FACULTY OF MEDICINE

3d. Special Psychology (third year). Twelve hours.

(NOTE.—The undergraduate courses for students taking the Psychi-atrical option are 2e, 3e 4d, 4e and 4f)

#### COURSES IN THE DEPARTMENT OF SOCIAL SERVICE

1a General Psychology. One hour a week.

2e. Social and Applied Psychology. Two hours a week.

#### COURSE IN THE DEPARTMENT OF PUBLIC HEALTH NURSING

1b. A course for Public Health nurses. Twenty-four hours.

#### LABORATORY COURSES

2f. Statistical exercises.

2g. Elementary experiments. Two hours a week.

3e. Practical laboratory course. Two hours a week.

3f. General experimental course. Two hours a week.

3g. Learning processes. Two hours a week.

4f. Selected laboratory problems for advanced students.

#### MATHEMATICS

ALFRED BAKER, M.A., LL.D.	.....	Professor Emeritus.
A. T. DELURY, M.A., LL.D.	.....	Professor.
M. A. MACKENZIE, M.A.	.....	Professor.
J. C. FIELDS, B.A., Ph.D., F.R.S.	.....	Professor.
J. CHAPELON, D.Sc.	.....	Professeur Agrégé.
S. BEATTY, Ph.D.	.....	Associate Professor.
I. R. POUNDER, M.A.	.....	Associate Professor.
J. L. SYNGE, M.A.	.....	Assistant Professor.
D. A. F. ROBINSON, M.A.	.....	Lecturer.
A. F. C. STEVENSON, B.A.	.....	Lecturer.
MISS M. E. G. WADDELL, M.A.	.....	Instructor.
R. G. ARCHIBALD, M.A.	.....	Fellow.
MISS M. E. DEFEW, B.A.	.....	Fellow.
MISS C. KRIEGER, B.A.	.....	Fellow.

## PASS COURSES

1a. Algebra: Simple equations of one, two and three unknown quantities; quadratic equations of one and two unknown quantities; elementary treatment of variation, proportion and progressions; interest forms and annuities. Text-book: DELURY, *Intermediate Algebra*. One hour a week.

1b. Analytical Geometry. A course on elementary analytical geometry of two dimensions, establishing the more important properties of the conic sections. Text-book: BAKER, *Analytical Geometry for Beginners*. One hour a week.

1c. Plane Trigonometry: Trigonometrical ratios, with their relations to one another; sines, etc., of the sum and difference of angles, with deduced formulae; solution of triangles; expressions for the area of a triangle; radii of circumscribed, inscribed and escribed circles. Text-book: HALL AND KNIGHT, *Elementary Trigonometry*. One hour a week.

1d. Algebra and Analytical Geometry: A review of permutations and combinations and a study of limits and series; a study of the conic sections and a treatment of tangents in general. Three hours a week.

2a. Algebra. A course on limits and infinite series, serving as an introduction to the calculus. One hour and a half a week.

2b. Analytical Geometry: A review and extension of the earlier course in two dimensions, with special attention to the graphs of functions, and an elementary course in three dimensions treating of the plane, the line, the sphere and the conicoids. One hour and a half a week.

3a. Differential and Integral Calculus. The elementary theory and applications. Three hours a week.

3b. History of Mathematics: The earlier period. One half hour a week.

3c. Differential and Integral Calculus: An extension of course 2g, designed to enable students to apply the calculus to problems arising in economics. Three hours a week.

4a. Calculus and Differential Equations: A continuation of the course in the Third Year, with an elementary course in differential equations. One hour a week.

4b. Geometry: A course on the modern methods of treating pure geometry. Two hours a week.

4c. History of Mathematics: The later period. One half hour a week.

4d. Mathematics of Statistics. Three hours a week.

## HONOUR COURSES

1g. Algebra: Limits, infinite series, with a special study of the binomial, exponential and logarithmic series; continued fractions; elementary number-theorems and determinants. Text-books: HALL AND KNIGHT, *Higher Algebra*; C. SMITH, *Treatise on Algebra*; CHRYSAL, *Algebra*. Two hours a week.

1h. Introduction to Analysis. Two hours a week.

1i. Analytical Geometry. An advanced course. Text-book: C. SMITH, *Conic Sections*. Two hours a week.

1j. Spherical Trigonometry. Text-book: TODHUNTER AND LEATHAM, *Spherical Trigonometry*. One half hour a week.

1k. Analytical Trigonometry: De Moivre's Theorem and a study of the more important trigonometrical infinite series and infinite products. Text-books: TODHUNTER AND HOGG, *Plane Trigonometry*; HOBSON, *Trigonometry*. One half hour a week.

1l. Elementary Analysis. Limits; binomial, exponential and logarithmic series, applications to problems in economics. Two hours a week.

2g. Differential and Integral Calculus. The elementary theory and applications. Text-book: OSGOOD, *Differential and Integral Calculus*. Two hours a week.

2h. Differential Calculus. An advanced course. Text-books: WILLIAMSON, *Differential Calculus*; SERRET, *Differential-und Integral-Rechnung*; DE LA VALLÉE POUSSIN, *Cours d'Analyse Infinitésimale*. Two hours a week.

2i. Integral Calculus: An advanced course. Text-books: WILLIAMSON, *Integral Calculus*, SERRET, *Differential-und Integral-Rechnung*; DE LA VALLÉE POUSSIN, *Cours d'Analyse Infinitésimale*. Two hours a week.

2j. Solid Geometry: An advanced course. Text-books: BELL, *Co-ordinate Geometry of three Dimensions*; C. SMITH, *Solid Geometry*. Two hours a week.

2k. Exercises on courses 2h, 2i and 2j preceding. Three hours a week.

3g. Differential Equations. Standard forms of first order and simple forms of higher order; linear equations with constant coefficients and general linear equations of second order. Text-books: COHEN, *Differential Equations*; CAMPBELL, *Differential Equations*. One hour a week.

3h. Theory of Equations: An elementary course, including applications to number-theory and geometry. Text-books: DICKSON, *Elementary Theory of Equations*; BURNSIDE AND PANTON, *Theory of Equations*. One hour a week.

3i. Differential Geometry: Space curves; envelopes and ruled surfaces, curvature of surfaces, lines on surfaces. Text-books: BELL, *Co-ordinate Geometry of three Dimensions*, GOURSAT-HEDRICK, *Mathematical Analysis*, Vol. I. Two hours a week.

3j. Theory of Functions of a Real Variable: The real number system; limits; sets, functions; continuity, aspects of uniformity, differentiation; integration; representations of functions. Text-books: GOURSAT-HEDRICK, *Mathematical Analysis*, Vol. I; PIERPONT, *Theory of Functions of a real Variable*. Three hours a week.

3k. Modern Pure Geometry. Geometry treated from the non-metrical standpoint based on properties of alignment. Text-books: DURELL, *Plane Geometry for Advanced Students*; VEBLEN AND YOUNG, *Projective Geometry*, Vol. I. Two hours a week.

4g. Theory of Functions. Text-books. HARKNESS AND MORLEY, *Introduction to Analytic Functions*, FORSYTH, *Theory of Functions*. Two hours a week.

4h. Differential Equations: The advanced course. Text-books: JOHNSON, *Differential Equations*; FORSYTH, *Differential Equations*. Two hours a week.

4i. Advanced Calculus: Implicit functions; definite integrals, multiple integration, etc. Text-book: GOURSAT-HEDRICK, *Mathematical Analysis*, Vol. I. Two hours a week.

4j. Modern Synthetic Geometry: Text-books: REYE, *Geometry of Position* (translated by Holgate); CREMONA, *Projective Geometry*, LACHLAN, *Modern Pure Geometry*; DURELL, *Plane Geometry for Advanced Students*; VEBLEN AND YOUNG, *Projective Geometry*, Vol. I. Two hours a week.

4k. Quaternions: With outlines of other Space Analyses. Text-books: KELLAND AND TAIT, *Quaternions*; JOLY, *Manual of Quaternions*; TAIT, *Quaternions*. Two hours a week.

4l. Theory of Probability: Text-book: Article on "Probability" in the eleventh edition of the *Encyclopædia Britannica*. One hour a week.

4m. Higher Plane Curves: With introductory course in Modern Geometry. Text-books: SALMON, *Higher Plane Curves*, CLEBSCH, *Vorlesungen über Geometrie*. Two hours a week.

4n. Invariant Theory: Text-books: SALMON, *Higher Algebra*, ELLIOTT, *Algebra of Quantics*; GORDAN, *Invariantentheorie*; GRACE AND YOUNG, *Algebra of Invariants*. Two hours a week.

4p. Theory of Substitution Groups with applications to Algebraic Equations. Text-books. NETTO, *Theory of Substitutions* (translated by Cole); WEBER, *Lehrbuch der Algebra*; DICKSON, *Introduction to the Theory of Algebraic Equations*. Three hours a week.

Course 4i is an alternative course for Course 9, Actuarial Science, offered for those students of the Fourth Year who have not taken Actuarial Science in the earlier years.

# COURSES IN THE FACULTIES OF ARTS AND MEDICINE

1r. Elementary Analysis: A course on limits and infinite series, with a special study of the binomial, exponential and logarithmic series. One hour a week.

1s. Elementary Analytical Geometry. One hour a week.

2r. Differential and Integral Calculus: An elementary course, with special attention to applications. Two hours a week.

3r. Finite Differences. Methods and use of formulae, elementary mathematical statistics. Two hours a week.

## COURSES IN THE FACULTY OF APPLIED SCIENCE

14. Algebra and Elementary Calculus. Limits; binomial, exponential and logarithmic series; the elementary theory of the differential and integral calculus, with simple applications. Two hours a week.

15. Analytical Geometry: An elementary course, emphasizing the general method in this subject. One hour and a half a week.

26. Differential and Integral Calculus: An elementary course, with applications. One hour a week.

## MECHANICS

W. J. LOUDON, B.A. .... *Professor.*

N. E. SHEPPARD, M.A. .... *Lecturer.*

1a. Elementary Mechanics. Two hours a week during Michaelmas term.

2a. Elementary Statics and Dynamics. Two hours a week during the Easter term.

2b. Principles of Mechanics. One hour and a half a week.

3a. Elementary Mechanics: A course of lectures for Third Year Pass Course. One hour and a half a week.

3b. Advanced Statics. Three hours a week during Easter term.

3c. Particle Dynamics. Two hours a week during Michaelmas term.

4a. Rigid Dynamics. Two hours a week.

4b. Celestial Mechanics. Two hours a week.

4c. Method of Least Squares. One hour a week during the Easter term.

## COURSE IN THE FACULTY OF APPLIED SCIENCE

5. Dynamics of Rotation. One hour a week.

## ACTUARIAL SCIENCE

M. A. MACKENZIE, M.A. .... *Professor.*

1a. Arithmetic: Decimals, interest and discount, annuities certain, bond values, etc. One hour a week.

1b. Accounting: Introductory course in accounting principles and their application in business of sole traders, partnerships and joint stock companies; operating accounts and balance sheets. Texts for reference: KESTER, *Accounting—Theory and Practice*, Vol. I, SPROTT AND SHORT, *Canadian Modern Accounting*. One hour a week.

2a. Accounting, advanced: A critical examination of the theory and practice of accounting, the preparation of financial statements, partnership and corporation adjustments, sinking funds, domestic and foreign branches, consolidated statements, income tax. Texts for reference: KESTER, *Accounting—Theory and Practice*, Vols. 1, 2 and 3; HATFIELD, *Modern Accounting*; DICKINSON, *Accounting Practice and Procedure*, SPICER AND PEGLER, *Bookkeeping and Accounts*. Two hours a week

2b. The Elements of the Theory of Life Annuities and Life Assurances. One hour a week.

3a. The Theory of Life Contingencies. An advanced course, Part I. Two hours a week.

3b. Cost Accounting: Principles of cost accounting, system of control over elements of cost, wage systems and time records, overhead and its distribution, job orders and process costs, relation of cost records to general accounts. Texts for reference: NICHOLSON AND ROHRBACH, *Cost Accounting*; EGGLESTON AND ROBINSON, *Business Costs*, JORDAN AND HARRIS, *Cost Accounting, Principles and Practice*, HAWKINS, *Cost Accounts*, NEWLOVE, *Cost Accounts*, SCOVELL, *Cost Accounting and Burden Application*. One hour a week

3c. Auditing: Principles of and procedure in audits, internal and external, scope and kinds of audits, office organization, internal check, analysis and reconstruction of operating and financial statements, reports to executives, treatment of special items affecting accounts and statements, special features in different business and financial organizations, legal decisions. Texts for reference. MONTGOMERY, *Auditing, Theory and Practice*, Vols. 1 and 2; DICKSER, *Auditing*; SPICER AND PEGLER, *Practical Auditing*; PIXLEY, *Auditing*. One hour a week.

3d. Finite Differences and Statistics: Elementary methods and formulæ. One hour a week.

4a. The Theory of Life Contingencies: An advanced course, Part II. Two hours a week.

## ASTRONOMY

C. A. CHANT, M.A., PH.D.....	..Professor of Astrophysics.
R. K. YOUNG, B.A., PH.D.....	..Associate Professor.
W. E. W. JACKSON, M.A.....	.....Demonstrator.
H. G. HANLEY.....	.....Assistant.
W. I. WELLS .....	.....Assistant.

## PASS COURSE

1. Introduction to Astronomy: An elementary course dealing with the various astronomical phenomena, including systems of co-ordinates, the constellations, the solar system, eclipses, comets and meteors, nebulae, star-clusters, the evolution of the stars. Text-book: YOUNG, *Elements of Astronomy*. Two hours of lectures and two hours of practical work per week, including some night observations.



## PASS AND HONOUR COURSES

2. *Elementary Astronomy*: A course intended for students in the Pass and Science courses. Text-book. YOUNG, *Manual of Astronomy*. Two hours a week.

3. *Elementary Practical Astronomy*: Intended to accompany 2. Consisting of observation (including photography) of the heavenly bodies; together with exercises in simple astronomical measurements and in the use of almanacs, globes, star-maps, photographs, etc. Text-book: WRITING, *Exercises in Astronomy*. Two hours a week, in afternoon or evening as arranged.

3a. *General Astronomy*: A course dealing chiefly with the celestial sphere and the motions of the heavenly bodies, also, the construction of star-maps. Text-book. YOUNG, *Manual of Astronomy*. Two hours of lectures and two hours of practical work per week, with some night observations.

4a. *Physical Astronomy*: In this course some of the modern problems of astronomy will be treated in an elementary manner, such as, determining the positions of the stars and their brightness, proper motions, parallaxes and statistics of the stars, together with the applications of the spectroscope in astronomy. Text-books: YOUNG, *Manual of Astronomy*; NEWALL, *The Spectroscope*. Two hours of lectures and two hours of practical work per week.

## HONOUR COURSES

4. *Astronomy*: A more advanced course. Text-books: ANDOYER, *Cours d'Astronomie*, tome i, *The Nautical Almanac*. For reference: BALL, *Spherical Astronomy*; CHAUVENET, *Spherical Astronomy*. Two hours a week.

5. *Practical Astronomy*: Observations with the equatorial telescope, the transit instrument and the sextant. By courtesy of the director of the Meteorological Observatory the astronomical instruments there are used by the students of the University. Text-book: CAMPBELL, *Practical Astronomy*. Two evenings a week.

6. *Computation Course*: A course for the discussion of astronomical observations and for computation, associated with Course 5. Two hours a week.

7. *Introduction to Astrophysics*. Text-books: SCHEINER, *Astronomical Spectroscopy*, BALY, *Spectroscopy*, SALET, *Spectroscopie Astronomique*. Two hours a week.

8. *Practical Astrophysics*: A laboratory course to accompany Course 7. One afternoon a week in the Michaelmas and two in the Easter term.

## PHYSICS

J. C. McLENNAN, O.B.E., Ph.D., D.Sc., LL.D., F.R.S.	Professor.
E. F. BURTON, B.A., Ph.D.	Professor.
J. SATTERLY, M.A., D.Sc.	Associate Professor.
L. GILCHRIST, M.A., Ph.D.	Associate Professor.
H. A. McTAGGART, Ph.D.	Associate Professor.
C. BARNES, M.Sc.	Demonstrator.
H. C. BATES, M.A.	Demonstrator.
MISS K. M. CROSSLEY, B.A.	Demonstrator.
H. J. C. IRETON, M.A.	Demonstrator.
MISS F. M. QUINLAN, M.A.	Demonstrator.
A. G. SHENSTONE, B.S., M.A., Ph.D.	Demonstrator.
H. G. SMITH, M.A.	Demonstrator.
MISS M. C. W. BUFFAM, B.A.	Assistant Demonstrator.
MISS R. CARNAHAN, B.A.	Assistant Demonstrator.
MISS E. COHEN.	Assistant Demonstrator.
MISS L. E. CROW, B.A.	Assistant Demonstrator.
M. J. LIGGETT.	Assistant Demonstrator.
L. M. MCKENZIE, B.A.	Assistant Demonstrator.
MISS B. M. REID, B.A.	Assistant Demonstrator.
MISS A. T. REED, B.A.	Class Assistant and Secretary to the Department.
A. C. PEACHEY.	Class Assistant.

The work of instruction in Physics consists of a series of courses of lectures and of practical work in the laboratories, which are embodied in the following schedule.

1. A course of seventy-five lectures on Properties of Matter, Mechanics, Hydrostatics and Heat. These lectures are illustrated by experiments. Text-books: EGGAR, *Mechanics*; WAGSTAFF, *Properties of Matter*; STEWART, AND SATTERLY, *Text-book of Heat*.

2. Properties of Matter, Mechanics, Hydrostatics and Heat: A laboratory course of seventy-five hours, one afternoon a week, throughout the year, designed to illustrate the lectures in Course 1. Text-books: As for Course 1, also ALLEN AND MOORE, *Text-book of Practical Physics*, Parts I and IV; CLARK, *Mathematical and Physical Tables*.

3. Elementary Magnetism and Electricity. A course of thirty-five lectures, given in two divisions 3a and 3b. Text-books: HADLEY, *Magnetism and Electricity for Students*; SYLVANUS THOMPSON, *Electricity and Magnetism*; BROOKS AND POYSER, *Electricity and Magnetism*; WATSON, *A Text-book of Physics*; STEWART, *Electricity and Magnetism*; HUTCHINSON, *Advanced Magnetism and Electricity*; BARLOW, *Mathematical Physics*, Vol. I.

4. Elementary Light. A course of twenty-five lectures, one a week beginning in the Michaelmas term. Text-books: STEWART AND SATTERLY, *Text-book of Light*; ENDER, *Light for Students*; WATSON, *A Text-book of Physics*.

5 Elementary Acoustics. A course of fifteen lectures, one a week. Text-books: CATCHPOOL, *Text-book of Sound*, POYNTING AND THOMSON, *Sound*, WATSON, *A Text-book of Physics*; D. C. MILLER, *The Science of Musical Sounds*.

The lectures in Courses 1, 3a, 3b, 4 and 5 are illustrated by experiments.

6. Magnetism, Electricity, Light and Acoustics: A laboratory course of one hundred and fifty hours, two afternoons a week throughout the year, designed to illustrate the lectures in Courses 3a, 3b, 4 and 5. Text-books: ALLEN AND MOORE, *Text-book of Practical Physics*, CARHART AND PATTERSON, *Electrical Measurements*; C. M. SMITH, *Electric and Magnetic Measurements*; EDSE, *Light for Students*; CLAY, *Treatise on Practical Light*; CATCHPOOL, *Sound*.

7. A course of lectures one hour a week on Elementary Light and Sound. Text-books as for courses 4 and 5.

8. A series of lectures, being a portion of the first year Pass Course, on the principles and application of Science. Text-book: BURTON, *Lectures in General Physics*.

9. A course of lectures and laboratory work, four hours a week, for second year pass students. This course includes Properties of Matter, Mechanics, Hydrostatics, and Heat. The lectures will deal with simple measurements, energy, gravitation and the pendulum, the general properties of solids, liquids and gases such as elasticity, viscosity and capillarity, the determination of fluid pressures, specific gravity and the theory and use of common forms of pumps, barometers, etc.; the thermal characteristics of various substances, including expansion, various thermometers, specific and latent heat and calorimetry; the phenomena observable during the change of state of substances from one form to another, conduction, radiation, heat and energy, the first and second laws of thermodynamics, engines; the liquefaction of gases and liquid air, the kinetic theory of matter. Text-books as for courses 1 and 2.

10. A course of lectures and laboratory work, four hours a week, for third year pass students. This course includes work in light and acoustics, and consists of a general explanation of wave motion, the reflection, refraction, diffraction and interference phenomena connected with wave motion; the production, propagation, and detection of sound waves; tuning forks, organ pipes and vibrating strings; various musical scales; analysis of complex sounds, the ear and voice, a study of mirrors, prisms and lenses, the eye, microscope, telescope and other optical instruments; dispersion, colour and spectroscopy; interference and diffraction, double refraction and polarisation; theories of light. Text-books as for Courses 4 and 5.

11. A course of lectures and laboratory work, four hours a week, for fourth year pass students. This course will consist of lectures and laboratory work in electricity and magnetism, including recent developments, such as radioactivity and radiology, laws of magnetism, static electricity,

condensers, electrical conduction in solids, liquids and gases, voltaic cell, chemical, magnetic and heating effect of the electrical current, potential; Ohm's law and its application, laws of electrical resistance, electromotive forces, induced currents, the induction-coil, alternating and high frequency currents, electrical waves, X-rays and radioactivity. Text-books as for Course 3.

12. Applications of the theory of Potential to Physics: A course of forty lectures. Text-book: STARLING, *Electricity and Magnetism*.

13. Properties of Matter: A course of lectures, two a week beginning in the Michaelmas term. Text-books: POYNTING AND THOMSON, *Properties of Matter*, EDSE, *General Physics*.

14. Geometrical Optics: A course of lectures, one a week. Text-books. GLEICHEN, *Theory of Modern Optical Instruments*, HEATH, *Geometrical Optics*, SOUTHALL, *Mirrors, Prisms, and Lenses*.

15. Advanced Heat and Elementary Thermodynamics: A course of lectures, one a week. Text-books: EDSE, *Heat for Advanced Students*; HART, *A Student's Heat*; PRESTON, *Heat*; E. H. GRIFFITHS, *Thermal Measurement of Energy*; E. GRIFFITHS, *Methods of Measuring Temperature*; PRESTON, *Heat*.

16. Thermodynamics: A course of twelve lectures on thermometry and pyrometry, gas and vapour equations and the fundamental principles of thermodynamics. Text-books as for Course 15.

17. A laboratory course on the accurate determination of physical constants, together with practice in laboratory arts. This course involves about one hundred and fifty hours' laboratory work. Text-books: ALLEN AND MOORE, *Text-book of Practical Physics*, WATSON, *A Text-book of Practical Physics*; SEARLE, *Simple Harmonic Motion*, SEARLE, *Experimental Elasticity*; WORSNOP AND FLINT, *Practical Physics*.

18. Calculations for Science Students: A course of practical instruction in mathematical drawing, graphs and their applications, biological, mineralogical, chemical and physical calculations and their accuracy, elementary calculus and statistics. Text-books: TUTTLE AND SATTERLY, *Theory of Measurements*; S. P. THOMPSON, *Calculus Made Easy*; GOOD, *Practical Plane and Solid Geometry*; D'ARCY THOMPSON, *Growth and Form*.

19. A short course of lectures and laboratory work on Radiation, including atomic structure and radioactivity.

20. Theory of Optics: A course of lectures two a week throughout the year. Text-books: DRUDE, *Theory of Optics*, MANN, *Manual of Advanced Optics*; TAYLOR, *College Manual of Optics*; BALY, *Spectroscopy*, WOOD, *Physical Optics*; SCHUSTER, *Theory of Optics*; HOUSTON, *A Treatise on Light*, JOHNSON, *Practical Optics*.

21. Elasticity: A course of lectures, two a week throughout the year, dealing with the mathematical theory of elasticity with application to the theory of double refraction and polarisation of light. Text-books: POYNT-

ING AND THOMSON, *Properties of Matter*; CHRISTIANSEN, *Elements of Theoretical Physics*, PELLAT, *Polarisation et Optique Crystalline*

22. Fourier's Series. A course of fifteen lectures on Fourier's Series and its applications to Physics. Text-books: DONKIN, *Acoustics*, BYERLY, *Fourier's Series and Spherical Harmonics*, BARTON, *A Text-book on Sound*; CARLE AND SHEARER, *Fourier and Periodogram Analysis*, LAMB, *Dynamical Theory of Sound*, CARSLAW, *Fourier's Series and Integrals*.

23. Thermodynamics. A course of lectures, one a week throughout the year. Text-books: POYNTING AND THOMSON, *Heat*; PARTINGTON, *Thermodynamics*; MAXWELL, *Heat*; LEWIS, *System of Physical Chemistry*; WHETNAM, *Solution and Electrolysis*, PRESTON, *Heat*.

24. Hydromechanics: A course of fifteen lectures during the Easter term. Text-books: MINCHIN, *Hydrostatics*; BESANT, *Hydro-mechanics*, LAMB, *Hydrodynamics*; BARTON, *Mechanics of Fluids*; RAMSEY, *Hydrodynamics*, BAIRSTOW, *Applied Aerodynamics*

25. Colloidal Solutions: A course of lectures on the physical properties of colloidal solutions. Text-book. BURTON, *The Physical Properties of Colloidal Solutions*.

26. A course of seventy-five lectures on Electricity and Magnetism including the Electromagnetic Theory of Light, Electron Theory of Matter, Dispersion, Absorption, Polarisation, Magneto-Optics, Electrical Oscillations, Conduction of Electricity in Gases, and Radioactivity. Text-books: J. J. THOMSON, *Elements of Electricity and Magnetism*, *Recent Researches in Electricity and Magnetism*, *Conduction of Electricity through Gases*; ABRAHAM AND LANGEVIN, *Ions, Electrons, Corpuscles*, DRUDE, *Theory of Optics*; LORENTZ, *The Theory of Electrons*; N. R. CAMPBELL, *Modern Electrical Theory*; RUTHERFORD, *Radioactive Substances and their Radiations*; STARLING, *Electricity and Magnetism*, MILLIKAN, *The Electron*, J. H. JEANS, *Electricity and Magnetism*; O. W. RICHARDSON, *The Electron Theory of Matter*; LEON BLOCH, *Précis D'Électricité Théorique*.

27. A laboratory course designed as an extension of Course 17, and as an introduction to research work. Text-books: MANN, *Optics*; WATSON, *Practical Physics*; WORSNOP AND FLINT, *Practical Physics*, MAKOWER AND GEIGER, *Radioactivity*.

A seminar is held once a fortnight in connection with this course, under the supervision of the Director of the Laboratory, at which reports on papers in the current physical journals are presented and discussed.

28. A course of lectures and laboratory work, specially designed for students taking a one-year course in Physics. Text-books: BROWN, *Experimental Science, Physics*, DUNCAN AND STARLING, *Light and Sound*, HUTCHINSON, *Intermediate Electricity and Magnetism*.

29. History of Physics: CAJORI, *History of Physics*; WHITTAKER, *History of the Theories of Aether and Matter*; LODGE, *Pioneers of Science*; *The History of the Cavendish Laboratory*, ARTHUR HAAS, *The New Physics*,

SEDGWICK AND TYLER, *A Short History of Science*; PAUL F. MOTTELAY, *Bibliographical History of Electricity and Magnetism*, MILLS, *The Realities of Modern Science*.

30 High Frequency Alternating Currents: A course of twenty-five lectures.

31. Vector Analysis. A course of twenty-five lectures: COFFIN, *Vector Analysis*.

32. Course of lectures and laboratory work in light introductory to Astronomy. Four hours per week.

33. A course of seventy-five hours on the properties of X-rays and their use in the determination of crystal formation.

#### UNIVERSITY EXTENSION

34. A general course of lectures and laboratory work in Physics dealing with Mechanics, Properties of Matter, Heat, Light, Sound, Electricity and Magnetism, to meet the needs of those intending to teach Physics in Secondary Schools

Regulations.—*Deposit Fee*: Each student taking laboratory course 2, 6, 10, 11, 17, or 28 is required to make a deposit of three dollars (\$3.00) before beginning work. All supplies, apparatus broken or destroyed and all fines will be charged against this deposit, which must be renewed when exhausted. At the close of the session cash balances will be returned on a day appointed for the purpose.

Additional Text-books.

General Physics: WHITE, WATSON, CANOT, KIMBALL, HASTINGS AND BEACH, DESCHANEL (ed Everett), JAMIN, VIOLE, NICOLS AND FRANKLIN, BARLOW, THOMSON AND TAIT, LEHFELDT, MILLIKAN AND GALE, MANN AND TWISS, DANIELL, H. A. WILSON, HOUSTON (*An Introduction to Mathematical Physics*), DUNCAN AND STARLING, *Dictionary of Applied Physics* (ed. Glazebrook).

Elementary Mechanics. ASHFORD, GLAZEBROOK, BRIGGS AND BRYAN, LONEY.

Elementary Hydrostatics: GLAZEBROOK, BRIGGS AND BRYAN, LONEY.

Elementary Mechanics and Heat: GREGORY AND HADLEY.

Elementary Heat GLAZEBROOK, TYNDALL, BALFOUR STEWART, TAIT, DRAPER, DARLING, SCARLETT, STEWART AND SATTERLY (*Sensor Heat*).

Elementary Light: JONES, TYNDALL, TAIT, WRIGHT, GLAZEBROOK, EMTAGE.

Elementary Electricity and Magnetism: POYSER, GLAZEBROOK, LEHFELDT, CUMMING, DAY, ASHFORD, WAGSTAFF, HUTCHINSON, ASHFORD AND KEMPSON.

Sound: TYNDALL, TAYLOR, CAPSTICK, ZAHM.

Geometrical Optics: HERMAN, ALDIS, HEATH, PARKINSON, PERCIVAL, WHITTAKER, LEATHAM, SEARER, SOUTHALL (*Geometrical Optics and Elementary Optics*); S. P. THOMPSON (*Optical Tables and Data*); VON ROHR,

*Theory of Optical Instruments*, trans. by R. Kantchack, and A. GLEICHEN, *Theory of Modern Optical Instruments*, trans by Elmsly and Swain, HOUSTOUN, *A Treatise on Light*.

Mechanics: PERRY (*Applied Mechanics*), BARTON (*Analytical Mechanics*); COX (*Mechanics*), THOMSON AND TAIT, LAMB (*Dynamics, Statics*), CRABTREE (*Spinning Tops*).

Hydromechanics: GREENHILL, BASSET, BARTON (*Mechanics of Fluids*), *The Mechanical Properties of Fluids* (collective work).

Sound (or Acoustics): DONKIN, RAYLEIGH, HELMHOLTZ, AIRY, KOENIG, LAMB, BARTON.

Elasticity. WILLIAMSON, LAMB, IBBETSON, LOVE, TODHUNTER, SEARLE.

Physical Optics: DRUDE, JAMIN, VERDET, BASSET, GLAZEBROOK, MACLAURIN, MASCART, SCHUSTER, WOOD, PRESTON, POYNTING (*Pressure of Light*), GEHRCKE, MALLIK, KAYSER.

Heat and Thermodynamics: CLAUSIUS, BUCKINGHAM, PARKER, WHETHAM, PLANCK, PRESTON, MAXWELL, TAIT, PARTINGTON, DONNAN, LEWIS (*Physical Chemistry*), GIBBS, EWING (*The Production of Cold*); EWING (*The Steam Engine*), HOBBS (*The Thermo-dynamics of engine design*), CLAUDE (*Liquid Air, Oxygen, Nitrogen*); DARLING (*Pyrometry*); LE CHATELIER, GRIFFITH (*Method of measuring temperatures*); R. BLONDLOT, *Introduction à l'étude de la Thermodynamique*, PHILLIPS, *Radiation*.

Properties of Matter: MEYER, *Kinetic Theory*; JEANS, *Dynamical Theory of Gases*; DARLING, *Liquid Drops and Globules*; TAIT *Properties of Matter*; EDSEER, *General Physics*; FINDLAY, *Osmotic Pressure*, PHILIP, *Physical Chemistry*, BOYS, *Soap Bubbles*; WILLOWS AND HATCHEK, *Surface Tension*, MCEWEN, *Properties of Matter*, BLOCH, *Kinetic Theory of Gases*

Electricity and Magnetism: POYNTING AND THOMSON, EMTAGE, MAXWELL, MASCART AND JOUBERT, GRAY, HEAVISIDE, DUBOIS, FOSTER AND PORTER, WEBSTER, STRUTT, SODDY, FOURNIER D'ALBÉ, ECCLES, BARLOW (*Mathematical Physics*, Vol. 1); KNAPP; JAMES (*Alternating Currents*); DRYSDALE (*Alternating Currents*), LIVEN, HUTCHINSON, TURNER, *Wireless Telegraphy and Telephony*, SCOTT-TAGGART, *Wireless*, HOUSTON, *An Introduction to Mathematical Physics*

Colloidal Solutions: BURTON, TAYLOR, HATSCHKE, SVEDBERG, OSTWALD, BANCROFT, BOGUE.

Relativity: CONWAY, CUNNINGHAM, ROBB, SILBERSTEIN, TOLMAN, EDINGTON, CARMICHAEL, LAWSON, FREUNDLICH, CARR, EINSTEIN, WEYL, BECQUEREL.

Modern Theories COMSTOCK AND TROLAND, DUNCAN, BRAGG (*X-rays and Crystal Structure*), SODDY, KAYE (*X-rays*); J. J. THOMSON, RUTHERFORD, CROWTHER (*Molecular Physics, Ions and ionising radiations*), CHADWICK, SOMMERFELD, ANDRADE (*Structure of the Atom*); RICHARDSON (*The*

*Electron Theory of Matter*); CHADWICK (*Radioactivity*); SOMMERFELD (*Atomic Structure and Spectral Lines*); ASTON (*Isotopes*); JEAN BECQUEREL (*Le Principe de Relativité*).

Practical Physics: LOUDON AND MCLENNAN, STEWART AND GEE, BARNES, GLAZEBROOK AND SHAW, KOHLRAUSCH, AYRTON, FINDLAY, SCHUSTER AND LEES, SEARLE, TUTTLE (*An Introduction to Laboratory Physics*).

Practical Mathematics (and Mechanics): CLARKE, SAXELBY, CASTLE, CARSE AND SHEARER (*Periodogram analysis*); GIBSON (*Graphs*); MINCHIN AND DALE, STERN AND TOPHAM, PERRY; GIBSON (*Graphs*); DE BRAY, *Exponentials made Easy*; BRODETSKY, *Nomography*; LIPEA, *Graphic and Mechanical Computation*.

Calculus (suitable for Physics students): EDWARDS, EDSEER, LODGE, PROCTOR, BLAINE, MERCER, PERRY (for Engineers), GIBSON, MELLOR (*Higher Mathematics for students of Physics and Chemistry*), GRAHAM, ORMSBY, GODFREY AND SIDDONS, LOVE, LAMB, PIAGGIO (*Differential Equations*).

Theory of Measurements and Errors: LUPTON, STEVENS, MACGREGOR, GOODWIN, TUTTLE, HOLMAN, MERRIMAN, JOHNSON, BOWLEY, UDNY YULE, JONES, BRUNT, WHITTAKER AND ROBINSON.

Mathematical and Physical Tables: BOTTOMLEY, CASTLE, CLARKE, CHAMBERS, DALE, HALL, KAYE AND LABY, MACFARLANE, MCAULAY, the Smithsonian, LONGLEY, WOODWARD, CHAPPELL, SILBERSTEIN, COSENS.

The Slide Rule: BLAINE, DUNLOP AND JACKSON.

## BIOLOGY

R. R. WRIGHT, M.A., B.Sc., LL.D.....	Professor Emeritus.
B. A. BENSLEY, B.A., PH.D.....	Professor of Zoology.
W. H. PIERSON, B.A., M.B....	Professor of Histology and Embryology.
E. M. WALKER, B.A., M.B....	Associate Professor.
A. G. HUNTSMAN, B.A., M.B.....	Associate Professor of Marine Biology.
A. F. COVENTRY, B.A. ....	Assistant Professor of Vertebrate Embryology.
J. R. DYMOND, M.A. ....	Assistant Professor of Systematic Zoology.
J. W. MACARTHUR, M.A., PH.D..	Assistant Professor of Genetics.
W. H. T. BAILLIE, M.A., M.B.	Assistant Professor of Mammalian Anatomy.
E. H. CRAIGIE, PH.D. ....	Lecturer in Comparative Anatomy.
W. J. K. HARKNESS, M.A. ....	Lecturer in Limnobiology.
N. K. BIGELOW, B.Sc.....	Assistant in Systematic Biology.
MISS N. H. C. FORD, PH.D.....	Instructor.
L. R. ANGUS.....	Class Assistant (Michaelmas Term).
J. N. BIRD, B.A. ....	Class Assistant (Easter Term).
C. C. BROWN, PHM.B., M.B. ....	Class Assistant.
A. K. COLLEY, B.A.. ..	Class Assistant.
J. L. HART. ....	Class Assistant (Easter Term).
H. HETHINGTON. ....	Class Assistant (Michaelmas Term).



A. E. McCULLOCH, B.A., M.B.	.. .. .	Class Assistant.
M. I. SPARES, B.A.	.. .. .	Class Assistant (Easter Term)
F. B. WILSON, PHM.B., M.B.	.. .. .	Class Assistant.

*Courses extending over only the Michaelmas or the Easter term are indicated as (m) and (e) respectively.*

With the exception of Course I, the lectures and practical instruction in this department are given in the University Biological Building. The instruction includes courses in General Biology, Zoology, Comparative Anatomy, Histology and Embryology, these courses being indicated in the various prescriptions as Zoology 2, 3, 4, etc.

For supplementary reading, except as specified below, the General Reading List of the Department may be consulted.

The following courses are provided:

#### PASS COURSES

1. General Science: A course of seventy-five lectures on the general principles and applications of science. This is a co-operative course, given by members of the departments of Physics, Chemistry, Geology, Botany and Zoology.

2. Elementary Biology: (a) A general educational course of two hours a week on the principles of science as applied to living organisms. The instruction is chiefly zoological, emphasis being placed upon the history of animal types and upon the biological aspects of the nature and social development of mankind. (b) A practical course of fifty hours in illustration of the principles and laboratory methods of Biology.

3. Invertebrate Zoology. A course of one hundred hours lectures and laboratory work on the elements of the principal branches of zoology as applied to the lower animals. For reference: SHULL, *Principles of Animal Biology*; COCKERELL, *Zoology*, PARKER AND HASWELL, *Text-book*, vol. 1.

4. Vertebrate Zoology: A course of one hundred hours lectures and laboratory work on the principal branches of zoology as applied to vertebrates, with special reference to those of human application.

#### HONOUR COURSES

5. Elementary Zoology: A course of two lectures a week throughout the Easter term on the nature, structure and classification of animals. For Honour Science students.

6. Elementary Zoology. A laboratory course of seventy-five hours on the general structure of the animal body, its organs and tissues and their functions, principles of adaptation, specialisation, and homology, based on selected types. Text-book. HEGNER, *College Zoology*. For reference. PARKER AND HASWELL, *Text-book of Zoology* (e).

7. Comparative Anatomy. A laboratory course of one hundred and fifty hours, comprising dissection and comparative study of selected vertebrate types: Part 1, Mammalian Anatomy (m); Text-book: BENSLEY,

*Anatomy of the Rabbit*; Part 2, *Anatomy of Lower Chordates* (e). For reference: PARKER, *Zoology*; KINGSLEY, *Vertebrate Zoology*; PARKER AND HASWELL, *Text-book*, Vol. 2; WIEDERSHEIM, *Comparative Anatomy*, REYNOLDS, *Vertebrate Skeleton*; KINGSLEY, *Comparative Anatomy*; NEWMAN, *Vertebrate Zoology*

8. *Vertebrate Zoology*: A course of twenty-five lectures on the system, structure and history of the vertebrates. For reference, as above (7); GADOW, *Classification of Vertebrates*, SMITH WOODWARD, *Vertebrate Palaeontology*; WILDER, *History of the Human Body*.

9. *Invertebrate Zoology*: A course of twenty-five lectures and seventy-five hours laboratory work on the system and morphology of the invertebrates. Text-book, PARKER AND HASWELL, Vol. I (m).

10. A course on mammalian anatomy and the system and natural history of animal foods. For Household Science students (m).

11. *Parasitology*: A course of fifty hours lectures and laboratory work on the parasites of man. Text-book. CHANDLER, *Animal Parasites and Human Disease*. For reference: PARKER AND HASWELL, *Text-book of Zoology*, Vol. I; FANTHAM, STEPHENS AND THEOBALD, *Animal Parasites of Man*, RILEY AND JOHANSEN, *Medical Entomology*; DOANE, *Insects and Disease*.

12. *Zoological Collection*: Students entering the Third Year in the special course of Biology are required to submit, as evidence of field proficiency, a collection of invertebrate animals from a prescribed group, together with an essay on the character and habits of the forms collected. Special directions may be had on application to the Biological Department.

13. *Vertebrate Embryology*: A course of twenty-five lectures on the embryology of the vertebrates.

14. A course of one hundred hours on limnobiology with special reference to the economic biology of fresh-water organisms.

15. *Problems of Biology*: An opportunity is afforded to advanced students to become acquainted with the main problems of biology and literature connected therewith. The instruction includes lectures and conferences conducted by different members of the staff, and a course of prescribed reading. The library is provided with the various works for consultation, a partial statement of which will be found in the departmental reading list

15a. *History of Biological Science*: A co-operative course dealing with the historical development of the biological branches.

16. *Vertebrate Embryology*: A laboratory course of one hundred hours on the general embryology of the vertebrates. For reference: JENKINSON, *Vertebrate Embryology*, HERTWIG, *Lehrbuch der Entwicklungsgeschichte*, LILLIE, *Development of the Chick*, BAILEY AND MILLER, *Embryology*, KELLICOTT, *General Embryology*, CHODAT, *Development*; PRENTISS, *Text-book of Embryology*; GRAHAM KERR, *Embryology*, MARSHALL, *Physiology of*

17. A course of one hundred hours on the principles and practical methods of genetics.

18. Structural Neurology. A course of lectures and laboratory work on the structure and development of the mammalian nervous system. For reference. EDINGER, *Anatomy of the Nervous System*; HERRICK, *Introduction to Neurology*.

18a. Comparative Neurology: A course of sixty hours lectures and laboratory work, designed to follow Course 18 or Anatomy 2. In this course is presented an outline of the evolutionary development and significance of the internal anatomy of the central nervous system. For reference: KAPPERS, *Vergleichende Anatomie des Nervensystems der Wirbeltiere und des Menschen*.

19. Zoological Collection. Students entering the Fourth Year in any one of the subdivisions of Biology are required to submit a collection of vertebrate animals from specified groups, together with an essay on the characters and habits of the forms collected. For reference. JORDAN, *Manual of Vertebrates*.

20. A lecture and laboratory course of one hundred hours on general invertebrate and vertebrate histology and cytology, including histological technique. Text-book, DAHLGREN AND KEPNER, *Principles of Animal Histology*. For reference. WILSON, *The Cell in Development and Inheritance*; GURWITSCH, *Morphologie und Biologie der Zelle*; SCHNEIDER, *Histologie der Tiere*; PRENANT, BOUIN, MAILLARD, *Trat   d'Histologie* (Vol. I, Cytologie); SHARP, *Introduction to Cytology*.

21. Vertebrate Zoology. A practical course of one hundred hours of laboratory and museum work on the morphology, classification and distribution of the vertebrates. For reference: GADOW, *Classification of Vertebrates*; FLOWER AND LYDEKKER, *Mammals Living and Extinct*; LYDEKKER, *Geographical History of Mammals*; Cambridge *Natural History*, Vols. vii-x, REYNOLDS, *The Vertebrate Skeleton*; FLOWER, *Osteology of the Mammalia*, SMITH WOODWARD, *Outlines of Vertebrate Palaeontology*; PARKER AND HASWELL, Vol. 2; WILLEY, *Amphioxus*; WIEDERSHEIM, *Comparative Anatomy*.

22. Advanced Invertebrate Zoology. A course of one hundred hours of lectures, laboratory and museum work on the morphology, embryology, classification and distribution of the invertebrates. This course is also designed to give training in laboratory methods and microscopic technique. For reference: PARKER AND HASWELL, Vol. I; HERTWIG's *Zoology*, edited by Kingsley, Cambridge *Natural History*, Vols. I-VI; KORSCHOLT AND HEIDER, *Embryology*; SCHNEIDER, *Histologie der Tiere*; selected papers; LEE, *Microtomeist's Vade Mecum*; GUYER, *Animal Micrology*.

23. A special course of one hundred hours on the system and natural history of animals, with special reference to those of Ontario or of Canada

Research. The members of the staff in this department are prepared to suggest problems for investigation in certain branches and to provide materials and laboratory facilities for properly qualified students. See "Calendar of the School of Graduate Studies."

#### COURSES IN THE FACULTY OF MEDICINE

24. A course of ninety lectures serving as an introduction to the biological fields in relation to medicine. The topics include (1) the general nature of living organisms and of cell processes, (2) the types of lower organisms of interest to students in Medicine, (3) the elements of comparative anatomy, and (4) biological principles as applied to man.

25. A laboratory course of one hundred and eighty hours, including microscope practice, elementary experimental studies on the nature of cell processes, types of lower organisms, and a selected list of vertebrates.

The entire course of two hundred and forty hours in the second year of Medicine consists of Courses 26-29

26. A course of ten lectures and twenty hours laboratory work introductory to embryology and histology.

27. A course of fifteen lectures and sixty hours laboratory work on histogenesis and general histology.

28. A course of twenty lectures and forty hours laboratory work on the development of the human body.

29. A course of fifteen lectures and sixty hours laboratory work on human microscopic anatomy.

NOTE.—Courses 26 to 29 are given in conjunction with the Department of Anatomy.

30. An introductory course of fifty lectures on the principles of evolution heredity and eugenics. Second Year option. \*

31. A course of sixty hours laboratory work on embryology (including technique) with special reference to the problems of mammalian and human embryology. Third Year option.

32. A course of sixty hours laboratory work on advanced vertebrate histology and cytology, including technique. Third Year option.

33. Parasitology. Third Year option. See Course 11.

34. Problems of Biology. Third Year option. See Course 15.

35. Comparative Neurology. Third Year option. See Course 18a.

#### COURSE IN THE FACULTY OF APPLIED SCIENCE

36. A practical course in experimental biology including the general principles of biology and microscope practice with the lower organisms

## COURSE IN THE FACULTY OF HOUSEHOLD SCIENCE

In addition to Courses 5, 6 and 10, which are taken by Household Science students, the following special course is provided:

37. A course on general biological principles and on vertebrate anatomy (m)

## COURSES IN THE FACULTY OF FORESTRY

In addition to Courses 5 and 6, which are taken by students in Forestry, the following special courses are provided.

38. Forest Entomology; twenty-five lectures and fifty hours laboratory work (e). Text-book: FERNALD, *Applied Entomology*. For reference: FELT, *Insects of Park and Woodland Trees*.

39. A short course on the principles of conservation as applied to animals.

## UNIVERSITY EXTENSION

40. An elementary course on the general structure of the animal body, its organs and tissues and their functions; classification and natural history of the common animals of Ontario, with special attention to principles of specialization, adaptation and distribution. The course is designed to give the student training in scientific method and also to afford assistance in the teaching of nature study

## BOTANY

J. H. FAULL, B.A., PH.D.	.....	.....	Professor.
R. B. THOMSON, B.A.	..	..	Professor of Phanerogamic Botany.
H. B. SIFTON, PH.D.	..	..	Assistant Professor.
G. H. DUFF, PH.D.	..	..	Assistant Professor of Plant Physiology.
MISS J. G. WRIGHT, PH.D.	..	..	Lecturer.
A. R. WALKER, M.A.	.....	.....	Instructor.
MISS C. W. FRITZ, B.A., M.Sc., PH.D.	.....	.....	Instructor.
G. D. DARKER, B.A.	.....	.....	Assistant.
C. S. HANES	.....	.....	Assistant.
MISS B. L. MACNAMARA, B.A.	.....	.....	Assistant.
E. H. MOSS, M.A.	.....	.....	Assistant.
W. R. WATSON	.....	.....	Assistant.

*Courses extending over only the Michaelmas or the Easter term are indicated as (m) and (e) respectively.*

The lectures and practical instruction in this subject are given in the Botany Building.

The following courses are provided:

# PASS COURSES

1. General Science Course. See p. 260.

2a Introductory Course in Botany: An introductory course of two hours a week on the general principles of Biology based mainly on the seed plants. Text-books: GANONG, *A Text-book of Botany for Colleges*; BERGEN, *A Key and Flora* (Northern and Central States Edition). For reference: KERNER AND OLIVER, *Natural History of Plants*.

2b. A laboratory course of two hours a week in connection with Course 2a.

3 A lecture and laboratory course on the lower plants. Four hours a week. Reference books: CURTIS, *Nature and Development of Plants*; GANONG, *A Text-book of Botany for Colleges*; LISTER, *Mycetozoa*, JORDAN, *General Bacteriology*; DUGGAR, *Fungous Diseases of Plants*; STEVENS, *Diseases of Economic Plants*; CLUTE, *Our Ferns in their Haunts*.

4 A lecture and laboratory course on the physiology and the adaptive relationships of plants; and on the general principles of heredity and plant breeding. Four hours a week.

# HONOUR COURSES

5. Elementary Botany: A course of twenty-five lectures on the life, structure and classification of plants. Text-book: CURTIS, *Nature and Development of Plants*. For reference: COULTER, BARNES AND COWLES, *Text-book of Botany*; GANONG, *A Text-book of Botany for Colleges*; KERNER AND OLIVER, *Natural History of Plants* (m).

6. A laboratory course of fifty hours in connection with Course 5 (m).

7. Phanerogamic Botany. A course of twenty-five lectures and seventy-five hours laboratory work on the anatomy and morphology of the flowering plants. Text-book: STRASBURGER, JOST, SCHENCK AND KARSTEN, *Text-book of Botany*, 5th English Edition (1922) or *Lehrbuch der Botanik*, 18th German Edition, and GRAY, *New Manual of Botany*. For reference: COULTER, *Seed-Plants*; BRITTON AND BROWN, *An Illustrated Flora* (e).

8. Classification of Flowering Plants: A lecture and laboratory course of fifty hours in which representatives of the main divisions of the flowering plants are studied in illustration of the fundamental principles of classification. Reference is also made to distribution, especially of the local flora, and to the food plants and other economic plants of the group (m).

9 Botanical Collection. Students entering the Second Year in Biology are required to submit a collection of at least 100 species of flowering plants, properly pressed, classified, mounted and labelled. For reference GRAY, *New Manual of Botany*; BRITTON AND BROWN, *An Illustrated Flora of the Northern United States and Canada*.

10. Phanerogamic Botany: A course of 100 hours dealing with the lower seed-plants, living and fossil. Text-book. COULTER and CHAMBERLAIN, *Morphology of Gymnosperms*. For reference: SCOTT, *Fossil Botany*, PENNALLOW, *North American Gymnosperms*; DEBARY, *Comparative Anatomy of the Phanerogams and the Ferns*, JEFFREY, *Anatomy of Woody Plants*.

11. Phanerogamic Botany. A course of 100 hours dealing with the higher seed-plants. Text-book. COULTER and CHAMBERLAIN, *Morphology of Angiosperms*. For reference: DEBARY, *Comparative Anatomy of the Phanerogams and the Ferns*; JEFFREY, *Anatomy of Woody Plants*.

12. Cryptogamic Botany: A lecture and laboratory course of one hundred and twenty-five hours on the system and morphology of the higher cryptogams. For reference: COULTER, BARNES and COWLES, *Text-book of Botany*, Vol. I; CAMPBELL, *Mosses and Ferns*; BOWER, *Origin of a Land Flora* (m).

13. Microbiology; an elementary course on the morphology and physiology of Bacteria, Yeasts and Molds for Household Science students. For reference: BUCHANAN, *Household Bacteriology*, MARSHALL, *Microbiology*; SAVAGE, *Bacteriological Examination of Food and Water*; CONN, *Bacteria, Yeasts and Molds in the Home*, TANNER, *Bacteriology and Mycology of Foods*; GUILLIERMOND-TANNER, *The Yeasts*; HEINEMANN, *Milk* (e).

14. Cryptogamic Botany; A lecture and laboratory course of one hundred and twenty-five hours on the system and morphology of the algae, fungi, bacteria, and slime molds. For reference: LISTER, *Mycetozoa*, JORDAN, *General Bacteriology*; FITTING, JOST, SCHENK and KARSTEN, *Lehrbuch der Botanik*; DEBARY, *Comparative Morphology and Biology of the Fungi, Mycetozoa and Bacteria*; DUGGAR, *Fungous Diseases of Plants*; OLTMANN, *Morphologie und Biologie der Algen*.

15. Classification of cryptogams: A lecture and laboratory course of fifty hours in which representatives of selected groups of cryptogams are studied from the taxonomic standpoint. Reference is also made to distribution, especially of the local flora (e).

16. Botanical Collection: Students entering the Fourth Year in Biology are required to submit a collection of cryptogamic plants from prescribed groups.

17. Plant Physiology I: A course of 25 lectures and 75 hours laboratory work on the nutrition, assimilation, metabolism and growth of plants. For reference: ATKINS, *Some Recent Researches in Plant Physiology*; BAYLISS, *Principles of General Physiology*; GANONG, *The Living Plant*, HAAS and HILL, *Chemistry of Plant Products*, Vol. II, JOST, *Plant Physiology*; MARSHALL, *Microbiology*; PALLADIN (Livingston), *Plant Physiology*, PFEFFER, *Physiology of Plants*; RUSSELL, *Soil Conditions and Plant Growth*.

18. **Oecology and Plant Geography:** A course on factors of habitat and the adaptations of plants to them; plant associations and their geographical distribution. For reference: WARMING, *Ecology of Plants*; SCHIMPER, *Plant Geography*; COULTER, BARNES AND COWLES, *Textbook of Botany*, Vol. II; KERNER AND OLIVER, *Natural History of Plants*. One hundred hours.

19 **Plant Physiology II.** A course of 25 lectures and 75 hours laboratory work on the physiology of absorption and translocation, permeability, the water relations and tropistic reactions of plants. For reference: AITKINS, *Some Recent Researches in Plant Physiology*; BAYLISS, *Principles of General Physiology*; FINDLAY, *Physical Chemistry and its Applications in Medical and Biological Science*; GANONG, *The Living Plant*, JOST, *Plant Physiology*; LIVINGSTON, *The Role of Diffusion and Osmotic Pressure in Plants*; OSTERHOUT, *Permeability and Electrical Conductivity of Living Tissue*; PALLADIN (Livingston), *Plant Physiology*, PFEFFER, *Physiology of Plants*.

20 A lecture and seminar course on the history of Botany and on the general principles of Biology as related to botanical problems. A list of assigned literature is obtainable on application to the Department. Students proposing to take this course should secure this list at the close of their third year.

20a. **Heredity and Plant Genetics:** A lecture and laboratory course of one hundred hours.

21. Students in the Third and Fourth Years of the Special Course in Biology will be expected to show a reading knowledge of French and German

22. **Plant Pathology:** A lecture, seminar, and laboratory course of one hundred hours on the diseases of plants.

23. **Palaeobotany:** A course of fifty hours on fossil plants.

24. Research studies on selected topics for advanced students. One hundred and fifty hours.

**Research:** The members of the staff in this department are prepared to suggest problems for investigation in certain branches and to provide materials and laboratory facilities for properly qualified students.

#### COURSE IN THE FACULTY OF APPLIED SCIENCE

25. A lecture and laboratory course of seventy-five hours on fundamental biological principles.

#### COURSE IN THE FACULTY OF FORESTRY

26. **Forest Pathology:** A lecture and laboratory course of seventy-five hours on the diseases of plants, especially of trees.



## UNIVERSITY EXTENSION

27. A course in Botany, with the emphasis on the Natural History of Plants, including a knowledge of the various types of plant life, and the classification, oecology and uses of both native and introduced forms. Some attention will also be given to the origin of our cultivated plants. The course is designed as a General Course in Botany to meet especially the needs of the Nature Study Teacher.

## ANATOMY

J. PLAYFAIR McMURRICH, M.A., Ph.D., LL.D.....	Professor.
W. H. PIERSOL, B.A., M.B . . . . .	Professor of Histology and Embryology.
J. C. WATT, M.A., M.D . . . . .	Associate Professor.
E. A. LINELL, Ch B., M.D. . . . .	Assistant Professor.
H. G. ARMSTRONG, M.B . . . . .	Demonstrator in Anatomy and Histology.
H. DE W. BALL, M.B. . . . .	Demonstrator in Histology (Easter Term).
P. M. BAYNE, M.A . . . . .	Class Assistant in Histology.
H. A. CATES, M.B. . . . .	Demonstrator.
W. A. COSTAIN, M.B . . . . .	Demonstrator.
S. J. EVELYN, M.B . . . . .	Demonstrator in Histology.
R. FARQUHARSON, M.B . . . . .	Demonstrator.
G. J. GILLAM, M.B., F.R.C.S. ENG . . . . .	Demonstrator.
A. R. HAGERMAN, M.B . . . . .	Demonstrator.
A. S. LAWSON, M.B. . . . .	Demonstrator.
E. A. McCULLOCH, B.A., M.B... . . . .	Demonstrator.
J. M. MACDONALD, M.D., C.M . . . . .	Demonstrator in Histology (Easter Term).
H. H. MACKAY, B.A . . . . .	Class Assistant in Embryology.
A. G. MCPREDRAN, B.A., M.B . . . . .	Demonstrator in Histology (Easter Term).
E. E. SHOULDICE, M.B . . . . .	Demonstrator.
H. A. L. SKINNER, M.B . . . . .	Demonstrator.
W. E. L. SPARKS, M.B . . . . .	Demonstrator.
H. G. WILLSON, B.A., M.D.....	Demonstrator.
O. C. J. WITHEROW, M.B . . . . .	Demonstrator in Histology (Easter Term).

1. Practical Anatomy.—A lecture and laboratory course extending throughout the year.

2. Histology.—A course of lectures and laboratory work, extending throughout the year.

3. Embryology.—A course of lectures and laboratory work dealing with the development of the human body.

4. Anatomy of the Nervous System.—A course of three lectures a week, with demonstrations twice a week, throughout the Michaelmas term.

5. Practical Anatomy.—A laboratory course throughout the Michaelmas term. Two lectures a week throughout Easter term.

6. Anatomical Research.—Opportunities will be afforded to properly qualified students for carrying on investigation in anatomical problems.

Text-books: PIERSOL, *Human Anatomy*; MORRIS, *Human Anatomy*, CUNNINGHAM, *Text-book of Anatomy*; GRAY, *Anatomy; Guide to the Dissection of the Human Body*; SOBOTTA-MCMURRICH, *Atlas and Text-book of Human Anatomy*; SPALTEHOLZ, *Hand Atlas of Human Anatomy*; TOLDT, *Atlas of Human Anatomy*; MCMURRICH, *The Development of the Human Body*; HERRICK, *Introduction to Neurology*, VILLIGER, *Brain and Spinal Cord*; BARKER, *The Nervous System*; RANSON, *The Anatomy of the Nervous System*, TREVES AND KEITH, *Surgical Applied Anatomy*; DAVIS, *Applied Anatomy*, BEESLEY AND JOHNSTON, *Surgical Anatomy*; JORDAN, *Textbook of Histology*, ARBY, *Developmental Anatomy*.

### BIOCHEMISTRY

A. HUNTER, M.A., B.Sc., M.B., CH.B.	Professor.
H. WASTENEYS, PH.D.	Associate Professor.
MISS C. C. BENSON, B.A., PH.D.	Associate Professor of Physiological Chemistry in the Faculty of Household Science.
H. B. SPEAKMAN, M.Sc.	Associate Professor of Zymology.
G. S. EADIE, M.A., M.B.	Demonstrator.
MISS J. MCFARLANE, M.A.	Demonstrator.
J. A. DAUPHINEE, M.A.	Fellow.
W. F. GEDDES, B.S.A.	Fellow.
A. M. GOULDING, B.A., M.D.	Fellow.
H. A. MACKECHNIE, B.A.	Fellow (part time).
J. W. SHIER, B.A.	Fellow (part time).

The following courses of instruction, each extending throughout the session, are offered:

1. A course of lectures in General Biochemistry; three hours a week.
2. A course of lectures and conferences in Advanced Biochemistry; two hours a week.
3. A laboratory course in General Biochemistry; four to six hours a week.
4. An advanced laboratory course in Biochemistry; six or more hours a week.
5. A course of lectures on the Principles of Nutrition; one hour a week during the Easter term. Open only to students who have taken Course 1.
6. Lecture course on Enzyme Chemistry. One half-hour a week.
7. Research in Biochemistry.

Text-books and Works of Reference:

(a) Elementary or General: HAMMARSTEN, *Text Book of Physiological Chemistry*; ABDERHALDEN-HALL, *Text Book of Physiological Chemistry*, MATHEWS, *Text Book of Physiological Chemistry*, ROBERTSON, *Principles of Biochemistry*.

(b) Advanced or Special: *Monographs on Biochemistry*, edited by Plummer and Hopkins, ROBERTSON, *Physical Chemistry of the Proteins*; TAYLOR, *Digestion and Metabolism*; LUSK, *Science of Nutrition*; EFFRONT, *Biochemical Catalysts in Life and Industry*, EULER, *General Chemistry of the Enzymes*; ABDERHALDEN, *Biochemisches Handlexikon*, NEUBERG, *Der Harn*.

#### Laboratory Handbooks:

(a) Elementary: PLIMMER, *Practical Organic and Biochemistry*, HAWK, *Practical Physiological Chemistry*, FOLIN, *Laboratory Manual of Biological Chemistry*; HALLIBURTON, *Essentials of Chemical Physiology*; COLE, *Practical Physiological Chemistry*.

(b) Advanced: ABDERHALDEN, *Handbuch der biochemischen Arbeitsmethoden*; ELLINGER, *Analyse des Harns*.

### FOOD CHEMISTRY

MISS C. C. BENSON, PH.D.	Associate Professor.
MISS J. PANTON, M.A.	Instructor
MISS M. ALLEN, B.Sc.	Assistant.

#### HONOUR COURSES

1. A course of lectures, two a week, on the Chemistry of Foods and Nutrition.
2. A laboratory course on the Chemistry of Foods, with discussion of supplementary reading. Six hours a week.
3. An advanced laboratory course on the Chemistry of Foods and on problems of Nutrition.
4. Research work on Food Chemistry and Metabolism.

#### PASS COURSES

5. Chemistry of Food Constituents. Laboratory work for pass students of the Third Year. Two hours a week.
6. Composition of Foods. Lectures and laboratory work for pass students of the Fourth Year. Four hours a week.
7. A course of lectures and laboratory work on the Chemistry of Foods for pass students of the Third Year in the Faculty of Household Science. Four hours a week.

Text-books and works of reference include: WINTON, *Food Analysis*; LEACH, *Food Inspection and Analysis*, LUSK, *Science of Nutrition*; PAVLOV, *The Work of the Digestive Glands*, ALLYN, *Elementary Applied Chemistry*, SNYDER, *Human Foods*; HALLIBURTON, *Essentials of Chemical Physiology*; Canadian and American bulletins on the chemistry of foods.

## PHYSIOLOGY

J. J. R. MACLEOD, M.B., Ch.B., D.P.H., D.Sc., F.R.S . . .	Professor.
J. M. D. OLMSTED, M.A., Ph.D. . . . .	Associate Professor.
N. B. TAYLOR, M.B., F.R.C.S. EDIN. . . .	Assistant Professor
J. MARKOWITZ, M.B. . . . .	Demonstrator
F. N. ALLAN, M.B. . . . .	Fellow (part time).
I. L. CHAIKOFF, B.A. . . . .	Fellow
W. R. FRANKS, B.A. . . . .	Fellow.
J. HEPBURN, M.B. . . . .	Fellow (part time).
W. S. KEITH, B.A. . . . .	Fellow (part time).
R. S. LANG, M.A., M.B. . . . .	Fellow (part time).
H. D. LOGAN, M.B. . . . .	Fellow (part time).
N. A. McCORMICK, M.A. . . . .	Fellow (part time).
M. J. WILSON, M.A., M.B. . . . .	Fellow (part time).
A. C. TAYLOR, B.A. . . . .	Fellow (part time).

The following courses of instruction, each extending throughout the Session, are offered:

1. Systematic lectures and demonstrations in human physiology. Four hours a week.
2. Lectures in general physiology.
3. Advanced lectures. Two hours a week.
4. General laboratory courses. (Total of 135 hours.)
  - (a) Neuro-muscular Physiology.
  - (b) Circulation, respiration and digestion.
  - (c) Nervous system and special senses.
5. Laboratory course in general physiology.
6. Advanced laboratory courses.
7. Research in physiology.
8. Journal Club. One hour a week.
9. Elementary lectures on the principles of human physiology.
10. History of Physiology. A course of lectures supplemented by discussions. Two hours a week.

Text-books and works of reference: G. N. STEWART, *Manual of Physiology*; J. J. R. MACLEOD, *Physiology and Biochemistry in Modern Medicine*; STARLING's or HOWELL's *Physiologies*; BAYLISS, *General Physiology*, LUCIANI, *Physiology* (trans. by F. Welby); *Monographs in Physiology* (ed. by E. H. Starling). *Monographs in Experimental Biology* (ed. by J. Loeb and W. J. V. Osterhout). Other works important for consultation are MARSHALL, *Physiology of Reproduction*; SCHÄFER, *Endocrine Organs*; *Text-book of Physiology* (ed. by E. A. Schäfer); *Recent and Further Advances in Physiology* (ed. by Leonard Hill); C. S. SHERRINGTON, *Mammalian Physiology*

## CHEMISTRY

W. L. MILLER, B.A., PH.D.	... ..	<i>Professor of Physical Chemistry.</i>
F. B. ALLAN, PH.D.	... ..	<i>Professor of Organic Chemistry, Secretary of the Department of Chemistry.</i>
F. B. KENRICK, M.A., PH.D.	... ..	<i>Professor.</i>
J. B. FERGUSON, B.A.	... ..	<i>Associate Professor.</i>
J. T. BURT-GERRANS, PHM.B., PH.D.	... ..	<i>Associate Professor of Electrochemistry.</i>
L. J. ROGERS, M.A.	... ..	<i>Assistant Professor.</i>
W. S. FUNNELL, M.A.	... ..	<i>Assistant Professor.</i>
W. H. MARTIN, PH.D.	... ..	<i>Assistant Professor.</i>
J. CRYER, B.A.	... ..	<i>Assistant.</i>
MISS E. V. EASTCOTT, M.A.	... ..	<i>Assistant.</i>
J. D. GARRARD, B.A.	... ..	<i>Assistant.</i>
A. R. GORDON, M.A.	... ..	<i>Assistant in Electrochemistry.</i>
H. R. HUGILL, B.A.	... ..	<i>Assistant in Electrochemistry.</i>
C. M. JEPHCOTT, M.A.	... ..	<i>Assistant.</i>
O. C. H. KITCHING, B.A.	... ..	<i>Assistant.</i>
C. A. MORRELL, B.A.	... ..	<i>Assistant.</i>
H. DESB. SIMS, B.A.	... ..	<i>Assistant.</i>
E. M. SPARLING, B.A.	... ..	<i>Assistant.</i>
R. B. WALKER, B.A.	... ..	<i>Assistant in Electrochemistry.</i>

This subject forms part of the courses of study prescribed for students proceeding to degrees in Arts, Applied Science and Engineering, Household Science, Forestry and Medicine.

In the Honour Courses "Chemistry" and "Chemistry Mineralogy and Geology I" the laboratory work of the Fourth Year consists of research in one of the branches of chemistry; and arrangements have been made under which this work may be carried out by students of the "Chemistry" course either in the Chemical Laboratory or in the laboratories of the department of Chemical Engineering or of Biochemistry, and in the case of students in the "Chemistry Mineralogy and Geology" course either in the Chemical Laboratory or in the laboratories of the department of Chemical Engineering.

## LECTURES

The following courses are provided:

1. Elementary Chemistry. An introductory course in general chemistry with experimental illustrations. Two lectures a week.
2. A course of lectures on the influence of chemistry on the progress of civilization. Two lectures a week during session. Note—These lectures are intended for fourth year Pass students but if the class is too small to justify the giving of this course, Course 7 with appropriate laboratory work will be substituted.

3. Elementary Organic Chemistry: A course of experimental lectures on the systematic classification of the aliphatic compounds and some of the more common aromatic compounds. Two lectures a week.

4. Organic Chemistry: The work in Course 3 is reviewed and extended, fuller consideration being given to the isocyclic compounds. Two lectures a week.

5. Advanced Organic Chemistry: A course on heterocyclic compounds, synthetic methods and stereochemistry. Two lectures a week.

6a. History of Chemistry: A short course of lectures, commencing in January, on the development of chemistry and chemical theory.

6b. Essays on Prescribed Topics.

7. Elementary Physical Chemistry: An experimental course on the elements of chemical mechanics and electrochemistry. Two hours a week.

8. Elementary Electrochemistry: Twenty-five lectures illustrated by experiments.

9. A course on the application of geometry and the calculus to physico-chemical problems. Two hours a week.

10. Chemical equilibrium in two-component systems, based on the theory of chemical potential. Two hours a week.

11. Advanced Physical Chemistry: The phase rule, chemical thermodynamics, and chemical kinetics. Two hours a week.

12a. Applied Chemistry.

12b. Applied Organic Chemistry.

# LABORATORY WORK

13. Elementary quantitative chemistry.

14. Elementary quantitative chemistry (shorter course).

15. Analysis, chemical mechanics and organic preparations. Four hours a week.

16. Quantitative and qualitative analysis.

17. Analysis of minerals and rocks.

18. Analysis, organic preparations and physico-chemical measurements.

19. Practical organic chemistry.

20. Physico-chemical measurements, and electro-chemistry.

21. Research work for advanced students.

24. A short course of physico-chemical measurements, including electrical conductivity, migration, and freezing point of solutions.

25. Electrochemistry, to accompany lecture Course 8.

26. A laboratory course to accompany Course 2.

27. Analysis, including electroanalysis.
28. Chemical equilibrium between salts and their aqueous solutions.
29. Chemical equilibrium, including silicates.

### LABORATORY REGULATIONS

Each student proposing to attend lectures or practical work in the chemical laboratory must apply for a card which will have marked on it the number of his seat in the lecture room, of his working place in the laboratory and of his locker. These cards will be given only to students presenting their registration cards, and no working place in the laboratory will be allotted until a deposit of four dollars (for some classes three dollars) has been made. Each student will be held responsible for the seat, etc., allotted him, and no change may be made without permission. At the close of the Easter term this card must be presented for certificate of attendance.

Each student is provided with a suitable note-book in which to keep an account of the work done by him during the year. These books will be examined from time to time, and marks will be assigned. The student's standing in practical chemistry is based upon these marks, together with those assigned for the practical examinations of the term, and for written examinations on the work.

An account will be kept with each student; all apparatus broken or destroyed and all fines will be charged against his deposit, which must be renewed when exhausted.

The apparatus provided is intended for use in the laboratory only, and may not be removed from the building. At the close of the term's work it must be returned clean and dry.

### GEOLOGY AND PALÆONTOLOGY

A. P. COLEMAN, M.A., PH.D., D.Sc., LL.D., F.R.S.	<i>Professor Emeritus.</i>
W. A. PARKS, B.A., PH.D.	<i>Professor of Geology.</i>
E. S. MOORE, M.A., PH.D.	<i>Professor of Economic Geology.</i>
A. MACLEAN, B.A.	<i>Associate Professor.</i>
MISS M. A. FRITZ, M.A.	<i>Class Assistant.</i>
S. F. KELLY, B.Sc.	<i>Class Assistant.</i>
R. THOMSON, B.A.	<i>Class Assistant.</i>

### PASS COURSES

1. Elementary Geology and Physiography: A course of twenty-five lectures is given weekly throughout the session. Works of reference: SCOTT, *Introduction to Geology*; DAVIS, *Physical Geography*; COLEMAN AND PARKS, *Elementary Geology*.

2. (a) A course of fifty lectures and (b) fifty hours' practical work, designed to cover the whole field in a general way. Works of reference: As in course No. 1.

3. Dynamic and Structural Geology. A shorter course for students of the pass course. Twenty-five lectures.

4. Palæontology: (a) A course of twenty-five lectures on Invertebrate and Vertebrate Palæontology; (b) a laboratory course of fifty hours.

5. Historical Geology: A course of fifty lectures and fifty hours laboratory work on historical geology and palæontology with special reference to Canada.

### HONOUR COURSES

6. Historical and Stratigraphical Geology and Palæontology. A course of fifty lectures is given throughout the session. Works of reference: SCOTT, *Introduction to Geology*; COLEMAN AND PARKS, *Elementary Geology*; GEIKIE, *Text-book of Geology*; PIRRSOON AND SCHUCHERT, *Text-book of Geology*; GRABAU, *Text-book of Geology*.

7. Illustrative practical course to accompany No. 6. A course of thirty hours in the use of maps and sections, and the study of fossils typical of the different formations.

8. Dynamical and Structural Geology: A course of fifty lectures. Works of reference: GEIKIE, *Geology*; CHAMBERLIN AND SALISBURY, *Geology*; LEITH, *Structural Geology*.

9. Invertebrate Palæontology. A course of fifty lectures throughout the session. Works of reference: Eastman's translation of ZITTEL's *Text-book of Palæontology*, NICHOLSON, *Manual of Palæontology*; GRABAU, *North American Index Fossils*.

10. Invertebrate Palæontology: A laboratory course of seventy-five hours. Works of reference: As in course No. 9; Palæontological publications of the Geological Survey of Canada, and of the different State surveys; Bulletins and Monographs of the Geological Survey of the United States.

11. Drawing and Cartography: A practical course of fifty hours in the Faculty of Applied Science.

12. Precambrian Geology: A course of twenty-five hours throughout the session. Works of reference: VAN-HISE AND LEITH, *Geology of the Lake Superior Region*, GEIKIE, *Text-book of Geology*; CHAMBERLIN AND SALISBURY, *Geology*, Vol. II; Reports of the Geological Survey of Canada and of the Ontario Department of Mines

13. Glacial Geology and Physiography: A course of twenty-five lectures throughout the session. Works of reference: GEIKIE, *Great Ice Age*; PENCK, *Morphologie der Erdoberfläche*; DE LAPPARENT, *Géographie Physique*.



14. Geological Surveying and Cartography: A course of field work and practical work in drafting. Three hours per week throughout the year.

15. Economic Geology: A course of fifty lectures throughout the session. Works of reference: KEMP, *The Ore Deposits of the United States and Canada*; RIES, *Economic Geology*; EMMONS, *General Economic Geology*, MOORE, *Coal*; BECK, *The Nature of Ore Deposits*, SPURR, *Ore Magmas*, Reports of the Geological Survey of Canada and of the Ontario Department of Mines.

16. Practical Economic Geology. A course of fifty hours laboratory work to illustrate course No. 15.

17. Meteorology: A course of twenty-five lectures. Works of reference: DAVIS, *Elementary Meteorology*; HANN, *Klimatologie*.

18. Vertebrate Palæontology: A course of twenty-five lectures. Works of reference: WOODWARD, *Vertebrate Palæontology*; NICHOLSON AND LYDEKKEER, *Manual of Palæontology*; ZITTELL, *Text Book of Palæontology*, Vol. II (translation by Eastman).

19. Stratigraphic Palæontology. A course of one hundred hours lectures and laboratory work. Works of reference: The publications in the Library of the Department, including various monographs on special subjects and the palæontological reports of the different states and societies.

20. Mining Geology: A course of twenty-five lectures on geological problems associated with mining, typical mining regions in Canada, the United States, and elsewhere being discussed from the geological side. Works of reference: As in courses Nos. 12 and 15.

21. A course of twenty-five lectures on Economic Geology and Geography for students in the course of Commerce and Finance. Works of reference: HUNTINGTON AND CUSHING, *Principles of Human Geography*.

22. Vertebrate Palæontology: A laboratory course of twenty-five hours.

23. Practical Precambrian and economic geology. Three hours per week, Easter term.

24. Economic geology of Canada: A course of twenty-five lectures

25. Mining: An elementary course of twelve lectures (No. 52 of Calendar of Faculty of Applied Science and Engineering)

## MINERALOGY AND PETROGRAPHY

T. L. WALKER, M.A., PH.D.....	Professor.
A. L. PARSONS, B.A. . . . .	Associate Professor.
J. E. THOMSON, B.A.Sc. . . . .	Assistant Professor.
D. KERR-LAWSON, B.A. . . . .	Demonstrator.

For students in the Faculty of Arts of the University of Toronto the following courses of lectures and demonstrations have been arranged:

1. Elementary Mineralogy: A course of twenty-five lectures once a week throughout the year. Books of reference: DANA, *Text-book of Mineralogy*; ROGERS, *Study of Minerals and Rocks*.

2. A short practical course illustrative of the above, involving twenty hours' laboratory work. Books of reference. As for Course 1.

3. Morphological Crystallography: A course of twenty-five lectures once a week throughout the year. Book of reference: WALKER, *Crystallography*.

4. Blowpipe Analysis and Determinative Mineralogy: A laboratory course of three hours a week throughout the year (two hours a week for pass students). Books of reference: EAKLE, *Mineral Tables*; LEWIS, *Determinative Mineralogy*.

5. Determinative Mineralogy: A laboratory course in continuation of Course 4. Two hours a week. Book of reference: LEWIS, *Determinative Mineralogy*.

6. Physical Mineralogy: A course of fifty hours' lectures and laboratory work, introducing the student to optical and physical crystallography as a preparation for the study of microscopic petrography (seventy-five hours for pass students). Books of reference: DANA, *Text-book of Mineralogy*; WALKER, *Crystallography*.

7. Practical Crystallography, including goniometric measurements, crystal drawing, projection and calculation with experiments in physical mineralogy. One day a week during the Michaelmas term.

8. Systematic Mineralogy: A course of fifty hours' lectures and laboratory work, being a continuation of courses 1 and 2. Books of reference: DANA, *Text-book of Mineralogy*; EAKLE, *Mineral Tables*.

9. General Mineralogy: Twenty-five lectures on special subjects to be selected from year to year. Books of reference: KOBELL, *Geschichte der Mineralogie*; FOUQUÉ ET MICHEL-LÉVY, *Synthèse des Minéraux et des Roches*.

10. General Mineralogy: Practical course of seven hours a week throughout the year.

11. Petrography: One hour a week lectures and practical work throughout the session. Books of reference: KEMP, *Handbook of Rocks*, HARKER, *Petrology for students*.

12. Petrography: Two hours a week devoted to practical petrography, both macroscopic and microscopic. Books of reference: LUQUER, *Minerals in Rock Sections*; HARKER, *Petrology for Students*.

13. Assaying: Laboratory work in the different branches of the subject, occupying three hours a week throughout the session.

14. Advanced Petrography: Twenty-five lectures on the characteristics of the rock-forming minerals and on general petrography. Book of reference: IDDINGS, *Rock Minerals*.

15. Mineralography: Fifty hours laboratory work in the study of opaque minerals by microscopic methods in reflected light. Book of reference: DAVY AND FARNHAM, *Microscopic Examination of the Ore Minerals*.

16. A course in Mineral Analysis, seventy-five hours.

17. Metallurgy, an introductory course of twelve hours.

The work in Mineralogy is carried on in the Mineralogical Laboratories in the Mining Building.

## HOUSEHOLD SCIENCE

### MEMBERS OF THE FACULTY OF HOUSEHOLD SCIENCE

MISS A. L. LAIRD, M.S.....	Associate Professor.
MISS L. K. STEWART, M.S. . . . .	Assistant Professor.
MISS E. M. McMILLAN, Ph.B.....	Lecturer.
MISS H. R. COATSWORTH, B.A....	Lecturer.
MISS H. LEWIS, B.S. . . . .	Instructor.
MISS E. W. PARK, M.A.....	Instructor.

### PASS COURSES

1a. History of Home Life: A course of lectures one hour a week throughout the session.

3a. Textiles and Household Management: A course of two lectures and one laboratory period a week throughout the session.

4a. Foods and Food Values: A course of two lectures and one laboratory period a week throughout the session.

### HONOUR COURSES

1b. Household Science: A course of lectures one hour a week throughout the session.

2a. Textiles and Household Management. A course of ten hours a week throughout the session. This includes (a) a study of textiles, (b) a study of metals, woods, etc., used in the home, and the principles underlying their care, (c) the house, (d) the home care of the sick.

3b. Foods and Food Values: A course of twelve hours a week throughout the session—lectures and laboratory work.

4b. Economics of the Household: A course of lectures and discussions two hours a week throughout the session. It includes the economics of spending, the division of the income, etc.

4c. Dietetics: A lecture course of two hours a week throughout the session and discussion periods, two hours a week.

4d. An advanced laboratory course of six hours a week throughout the session designed to illustrate the lectures in Course 4c. Each student also investigates a problem related to her work.

## COURSES IN THE FACULTY OF HOUSEHOLD SCIENCE

1c. Art and Design in the Home. A course of lectures and laboratory work, two hours a week throughout the session.

2b. Textiles and Household Management. A course of two lectures and one laboratory period a week throughout the session.

3c. Foods and Food Values. A course of nine hours a week throughout the session—lectures and laboratory work.

3d. House Planning. A course of four hours a week for half the session.

4c. Foods and Diet. Discussions and laboratory work, four hours a week.

4f. Textiles. An advanced course, eight hours a week.

4g. Dietetics. A course of lectures and laboratory work, nine hours a week.

## COURSE IN THE DEPARTMENT OF PUBLIC HEALTH NURSING

5. A lecture course in nutrition and dietetics; family budgets are also discussed.

Occasional Work: Under certain conditions, occasional students may be admitted to Courses 3c and 4a.

Graduate Work: Opportunities are offered in the laboratories to graduate students who desire to engage in research work.

Laboratory deposit fee: a deposit of three dollars (\$3.00) is required of each student taking laboratory courses. This amount, minus the cost of equipment and apparatus destroyed, will be returned at the end of the session.

Books of reference: FRIEDENWALD AND RUHRAH, *Diet in Health and Disease*; CARTER, HOWE AND MASON, *Nutrition and Clinical Dietetics*; SHERMAN, *Chemistry of Food and Nutrition*; LUSE, *Science of Nutrition*; GRULEE, *Infant Feeding*; HESS, *Principles and Practice of Infant Feeding*; SHERMAN AND SMITH, *The Vitamins*; BAILEY, *Source, Chemistry and Use of Food Products*; SHERMAN, *Food Products*; TIBBLES, *Foods, their Origin, Composition and Manufacture*; LEACH, *Food Inspection and Analysis*; WILEY, *Foods and Their Adulteration*; WELD, *Marketing of Farm Products*; MCKILLOP AND ATKINSON, *Economics*, *American Academy of Political and Social Science*, *Cost of Living*; LEEDS, *The Household Budget*; ABEL, *Successful Family Life on a Moderate Income*; CAMPBELL, *Household Economics*; RICHARDS, *Cost of Living*, *Cost of Shelter*; RAVENHILL, *Household Administration*; TINKLER AND MASTERS, *Applied Chemistry*, Vol. I, SNELL, *Elementary Household Chemistry*; WOOLMAN AND MCGOWAN, *Textiles*; MCGOWAN AND WAITE, *Textiles*; DOOLEY, *Textiles*; DYER, *Textile Fabrics*; BALDERSTON, *Laundering*, MARSH, *Laundry Work*; BALDERSTON, *Housewifery*; CLARK, *The Care of a House*; VAN RENSSELAER, ROSE AND CANON, *Manual of Home Making*; AIKENS, *Handbook of Practical Nursing*; MAXWELL AND POPE, *Practical Nursing*, DOW, *Composition (Art and Design)*, *Government Bulletins*, *Journal of Biological Chemistry*, *Journal of Home Economics*

## RELIGIOUS KNOWLEDGE

S. M. ADAMS, M.A.	Trinity College.
REV. W. R. R. ARMITAGE, M.A.	Wycliffe College.
W. T. BROWN, M.A., Ph.D.	Victoria College.
REV. R. DAVIDSON, Ph.D.	Knox College.
REV. ALFRED GANDIER, M.A., D.D., LL.D.	Knox College.
S. H. HOOKE, M.A., B.D.	Victoria College.
REV. B. W. HORAN, M.A., B.D.	Wycliffe College.
REV. A. J. JOHNSTON, B.A., D.D.	Victoria College.
REV. E. A. MCINTYRE, M.A., B.D.	Wycliffe College.
REV. J. F. McLAUGHLIN, B.A., D.D.	Victoria College.
REV. J. T. McNEILL, M.A., Ph.D.	Knox College.
REV. WILLIAM MANSON, M.A.	Knox College.
REV. S. A. B. MERCER, M.A., D.D., Ph.D.	Trinity College.
REV. J. H. MICHAEL, M.A.	Victoria College.
REV. H. C. S. MORRIS, M.A.	Trinity College.
REV. T. R. O'MEARA, D.D., LL.D.	Wycliffe College.
REV. C. VENN PILCHER, M.A., D.D.	Wycliffe College.
REV. W. A. POTTER, M.A., B.D.	Victoria College.
REV. D. M. RAMSAY, D.D.	Knox College.
REV. N. ROCHE	St. Michael's College.
REV. W. ROLLO, M.A.	Trinity College.
REV. C. A. SEAGER, M.A., D.D.	Trinity College.
REV. W. E. TAYLOR, M.A., Ph.D.	Wycliffe College.
REV. F. H. WALLACE, M.A., D.D.	Victoria College.

## FIRST YEAR

- 1a. A first course in the English Bible. One hour.
- 1b. A first course in Natural and Revealed Religion. One hour.
- 1c. A first course in the language of the Greek New Testament. Three hours.
- 1d. Oriental Languages 1a, p. 88. One hour.

## SECOND YEAR

- 2a. A second course in the English Bible. Two hours.
- 2b. A second course in Natural and Revealed Religion. Two hours.
- 2c. A second course in the language of the Greek New Testament. Not less than two hours.
- 2d. A course in Church History (Victoria). Two hours.
- 2e. Oriental Languages 2a, p. 88. Two hours.

### THIRD YEAR

- 3a. A third course in the English Bible. Three hours.
- 3b. A third course in Natural and Revealed Religion. Three hours.
- 3c. A first course in the Literature and Language of Greek Testament. Three hours.
- 3d. A course in Church History. Three hours.
- 3e. A first course in the History and Philosophy of Religion. Three hours.
- 3f. Oriental Languages 3a, p. 88. Three hours

### FOURTH YEAR

- 4a. A fourth course in the English Bible. Three hours.
- 4b. A fourth course in Natural and Revealed Religion. Three hours.
- 4c. A second course in the Literature and Language of Greek Testament. Three hours.
- 4d. A course in Church History. Three hours.
- 4e. A second course in the History and Philosophy of Religion. Three hours.
- 4f. Oriental Languages 4a, p. 88. Three hours.

### WORLD HISTORY

C. T. CURRELLE, M.A. . . . . *Professor of the History of Industrial Art.*  
 Miss C. G. HARCUM, M.A., Ph.D. . . *Assistant Professor of the History of Industrial Art.*

Students of the Third and Fourth Years will attend the same lectures and will take either course 1 or course 2.

- 1. A course on the History of Art.
- 2. A course on the Development of the Mechanical Industries.

These courses are to be taken in alternate sessions.

### MILITARY STUDIES

W. R. LANG, D.Sc., COLONEL, C.M. (late General Staff, C.E.F.) . *Director*  
 G. S. CARTWRIGHT, C.B., C.M.G., BRIG.-GEN. (late R.E.), *Special Lecturer.*

These courses are options in all Arts courses of the second, third and fourth years respectively. Students who have had some military training—C.E.F., Militia, or Cadet Corps—are admitted

1. (*Juniors*) This course comprises elementary tactics, topography, musketry, organization and administration, and (in addition to these professional subjects) lectures on citizenship, the relations between the various parts of the Empire with regard to defence, trade-routes, coal and fuel stations, naval power, and the distribution of the Empire's armed forces.

2. (*Intermediate*) The professional subjects of course 1 are continued on a more advanced grade, with the addition of Military Hygiene and Military Geography.

In addition to the educative nature of the subjects considered in these two courses, they comprise the work necessary for C.O.T.C. certificate "A" which qualifies for substantive commissions as Lieutenants of Infantry. Candidates completing these and passing the examination prescribed by the Imperial Authorities for all O.T.Cs. in the Empire and conducted by the Militia Department are recommended for this certificate

3. (*Seniors*) This course covers the work required for the higher certificate and involves the study of Organization, Administration, Strategy, and some portion of Military History. Those who complete this course successfully and have had defined military experience are recommended to the Militia Department as candidates for the certificate.

4. (*Special*) This course covers the work of courses 1 and 2 and is for students *with previous service in the O.T.C. or other Militia Unit* who are unable to attend courses 1 and 2

5. (*Engineers*) For those already in possession of Certificate "A" who desire to qualify for commissions in the Engineer branch of the Militia. Students in the final years of the Faculty of Applied Science are eligible.

6. (*Medicals*) For students of the fifth and sixth years in Medicine with previous service in the O.T.C. or other militia unit who desire to be qualified for commissions in the Canadian Army Medical Corps on graduation.

For particulars of the C.O.T.C., in which the practical portion of these courses is done, see page 161.

# PASS COURSE TIME-TABLE

	MONDAY	TUESDAY	WEDNESDAY
9	1 Latin 2 German 3 Ethics 4 English	1 English 2 Latin 3 Hebrew, Rel. Know., Mil. Stud. 4 Ethics	1 Latin 2 Rel. Know., Mil. Stud. 3 Ethics 4 English
10	1 German 2†French 3 Latin 4 Latin	1 French 2 German 3 English 4 Math. I, Chem.	1 French 2 English 3 Phys, G & M, H.S. 4 French
11	1 Mathematics 2 Zool., Bot., Math. II, Astronomy 3 G. & R., Anc. Or., Mod. Hist. 4 Rel. Know., Mil. Stud.	1 Trig., Rel. Know. 2 Greek 3 Math. I, Chem. 4 Hist. Phil., Psychol.	1 Heb., Ital., Span. 2 Chem., Math. I 3 Economics 4 G & R, Anc Or., Mod. Hist.
12	1 Science 2 Greek 3 Hist. Phil 4 Math. II, Zool., Bot.	1 Science 2 G. & R., Anc. Or., Mod. Hist. 3 Math. II, Bot, Zool. 4 Greek, French	2 Phys., G. & M. 3 G. & R, Anc. Or., Mod. Hist. 4 Hebrew, Phys., G & M., H.S.
2	1 French 2†Chemistry, †Astronomy 3†Phys, †G & M., †H.S. 4 Economics	1 Greek 2†Phys, †G. & M 3 Ital, Span. 4 Ital, Span.	1 Greek 2†Zool., †Bot. 3 French 4 German
3	1 Greek 2†Chemistry, †Astronomy 3†Phys, †G & M., †H.S. 4†Psychol.	1 Heb., Ital., Span. 2†Phys., †G. & M. 3 Economics 4†Zool., †Bot.	2†Zool., †Bot. 3 German 4†Phys., †G. & M., †H.S.
4	1 Economics 2 Philosophy, Psychol. 4†Psychol.	2 Economics 3 Psychol 4†Zool., †Bot	2 Heb., Ital, Span. 3 Greek 4†Phys, †H S.

The third and fourth year hours of instruction in the Sciences are subject to change of which due notice will be given to the students concerned.

†Hours reserved for Scientific French.



# PASS COURSE TIME-TABLE

	THURSDAY	FRIDAY	SATURDAY
9	1 English 2 Latin, G. & M 3 Ethics  4 Rel. Know., Mil. Stud.	1 Latin 2 Greek 3 Rel. Know.  4 English	2 Rel. Know., Mil. Stud. 3 English  4 French
10	1 Greek 2†French 3 English 4 G. & R., Anc. Or., Mod. Hist.	1 German 2 Latin 3 French 4 Ethics	1 Latin 2 English 3 Greek, French 4 German
11	1 Heb., Ital., Span. 2 Chem., Math I  3 Phys., G & M., H.S. 4 Math. II, Zool., Bot.	1 Mathematics 2 French  3 Latin 4 Latin, Math. I., Chem.	1 French 2 Heb., Ital., Span.  3 German 4 Hebrew, Phys., G & M., H.S.
12	1 Anc. History 2 Zool., Bot., Math. II, Astronomy 3 Hist. Phil., Zool., Bot., Math. II 4 Ital., Span.	1 Science 2 Phys 3 Math. I, Chem. 4 Hist. Phil., Psychol.	1 German 2 G. & R., Anc. Or., Mod. Hist. 3 Hebrew, Mil. Stud.
2	1 German 2 Economics 3†Chemistry 4†Chemistry	1 Heb., Ital., Span. 2 German 3 Ital., Span., Heb. 4 Economics	
3	1 Economics 2 Heb., Ital., Span. 3†Chemistry  4†Chemistry	2 Philosophy, Psychol 3†Zool., †Bot., †Psychol.* 4 Greek	
4	2 G. & R., Anc. Or. Mod. Hist 3 Psychol.	2 Psychol  3†Zool., †Bot., †Psychol.*	

\*An alternate laboratory course may be arranged on another day for students unable to attend this course.

†Laboratory periods.

# PRESCRIPTION FOR COURSES

The courses leading to the degree of Bachelor of Arts are

(a) THE PASS COURSE

(b) The following Honour Courses.—

CLASSICS	PSYCHOLOGY
GREEK AND HEBREW	MATHEMATICS
ORIENTAL LANGUAGES (GREEK OPTION)	MATHEMATICS AND PHYSICS
ORIENTAL LANGUAGES	PHYSICS
HEBREW AND ANCIENT HISTORY	BIOLOGY
FRENCH GREEK AND LATIN	PHYSIOLOGY AND BIOCHEMISTRY
MODERN LANGUAGES	BIOLOGICAL AND MEDICAL SCIENCES
ENGLISH AND HISTORY	CHEMISTRY
MODERN HISTORY	CHEMISTRY MINERALOGY AND GEOLOGY
POLITICAL SCIENCE	GEOLOGY AND MINERALOGY
COMMERCE AND FINANCE	SCIENCE (GENERAL)
PHILOSOPHY	HOUSEHOLD SCIENCE
PHILOSOPHY (ENGLISH OR HISTORY OPTION)	HOUSEHOLD ECONOMICS

The requirements for each of these courses are detailed in the following schedules, where the numerals refer to the corresponding numbers of the courses on the pages indicated.

## PASS COURSE

### FIRST YEAR

1 Except under special circumstances and on the recommendation of his College, a student of the First Year presenting Honour Matriculation certificates, may not claim exemption in more than two subjects, and so must attend lectures and write examinations in at least four subjects, all other students must take the six following subjects :

1. English 1a, 1b, pp. 91, 92	2 hours
2. Latin 1a, p. 85	4 "
3. Mathematics 1a, 1b, p. 126	2 "
4. One of Greek 1a or 1b, p. 83	4 "
Hebrew 1b, p. 88	4 "
German 1a, p. 95	4 "
French 1a, p. 97	4 "
Italian 1a or 1c, p. 100 or Spanish 1a or 1d, p. 101	4 "
5. One of Greek and Roman History 1, p. 87	1 "
Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
6. One of a second language from 4	4 "
General Science 1, p. 130 (see section 6, p. 165)	3 "

2. A student of Chinese birth and education is permitted to substitute Chinese for Latin in the First and Second Years. For such students a special curriculum in Chinese will be prepared.

## SECOND YEAR

In selecting the subjects of study in the Second Year the student should have in mind the subjects intended to be taken in the Third and Fourth Years.

1. A subject chosen in the Second Year should be continued through the Third and Fourth Years; foreign languages continued from the First Year, viz., Greek, Latin, Hebrew, German, French, Italian, Spanish, as well as English, Greek and Roman History, Ancient Oriental History, and Philosophy, may be taken in the Second Year without obligation to continue them in the Third and Fourth Years.

2. Modern History, Political Economy, \*Psychology, Mathematics I, Mathematics II, Astronomy, Physics, Zoology, Botany, Chemistry, Geology and Mineralogy, Military Studies, if taken in the Second Year, must be continued throughout the Course.

3. Greek and Roman History, Ancient Oriental History, Modern History, Political Economy, Ethics and History of Philosophy may be begun in the Third Year, but if chosen must be continued in the Fourth Year.

4. English and Religious Knowledge may be taken in the Third and Fourth Years without having been taken in the Second Year.

5. A student who proposes to take Household Science in the Third and Fourth Years is required to take Chemistry in the Second Year and Food Chemistry in the Third and Fourth Years.

6. A student who has no credit for General Science in the First Year must take in the Second Year either General Science of the First Year or one of the Sciences (including Mathematics I and Mathematics II) beginning in the Second Year. In the latter case the subject chosen must be continued through the Third and Fourth Years.

7. No student may take three foreign languages or three Sciences except by special permission of the Council on the recommendation of his College, but this permission does not carry with it the right to continue the three subjects in the Third and Fourth Years.

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\*In the Third and Fourth Years Ethics or History of Philosophy may be substituted for Psychology.

8. A student of the Second Year who has not previously taken Hebrew may, with the consent of his College and of the Council of the Faculty of Arts, substitute Hebrew of the First Year for a language of the Second Year, on condition that he substitute Hebrew of the Second and Third Years for a language of the Third and Fourth Years respectively.

9. The choice of subjects made in the Second Year cannot be varied except on joint action of the College and University authorities.

#### PRESCRIPTION FOR THE SECOND YEAR PASS COURSE

1. One of Greek 2a or 2b, p. 83	3 hours
Latin 2a, p. 85	3 "
Hebrew 2b, p. 88	3 "
Mathematics I: Mathematics 2a, 2b, p. 126	3 "
Mathematics II: Actuarial Science 1a, p. 129	3 "
Astronomy I, p. 130	4 "
Physics 9, p. 133	4 "
Zoology 2, p. 139	4 "
Botany 2a, 2b, p. 144	4 "
Chemistry 1, 14, pp. 151, 152	4 "
Geology and Mineralogy: Mineralogy 1, 4, 11, pp. 155, 156	4 "
2. One of Greek 2a or 2b, p. 83	3 "
Latin 2a, p. 85	3 "
Hebrew 2b, p. 88	3 "
German 2a, p. 95	3 "
French 2a, p. 97	3 "
Italian 2a or 2b, p. 100 or Spanish 2a or 2b, p. 101	3 "
3. Three of	
An additional language from 2	3 "
English 2a, 2b, p. 92	2 "
Greek and Roman History 2a, p. 87 or	2 "
Ancient Oriental History 2a, p. 90 or	2 "
History 2a, 2b, p. 103	3 "
Political Economy 2e, p. 111	2 "
Philosophy 2a, p. 117 or †2e, p. 120	3 "
Psychology 2a, 2f, pp. 124, 125	3 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
Not more than two of	
Mathematics I: Mathematics 2a, 2b, p. 126	3 "
Mathematics II: Actuarial Science 1a, p. 129	3 "
Astronomy I, p. 130	4 "
Physics 9, p. 133	4 "
Zoology 2, p. 139	4 "

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SECOND YEAR—*Continued*Not more than two of—(*Contd.*)

Botany 2a, 2b, p. 144	4 hours
Chemistry 1, 14, pp. 151, 152	4 "
Geology and Mineralogy: Mineralogy 1, 4, 11, pp. 155, 156	4 "
General Science 1, p. 139	3 "

## THIRD AND FOURTH YEARS

The plan upon which the work of the Third and Fourth Years is arranged is indicated so that students of the Second Year may make their choice of subjects of that year in such a way as to be able to enter the particular group desired in the higher years with the least possible adjustment.

The subjects of the Third and Fourth Years are arranged as follows:

(a) Greek, Latin, Hebrew	3 hours
(b) German, French, Italian or Spanish	3 "
(c) English	3 "
(d) Religious Knowledge or Military Studies	3 "
(e) Greek and Roman History, Ancient Oriental History, Modern History, Ethics, History of Philosophy, Political Economy, Psychology	3 "

Note—A student will be allowed to take two of the first three subjects in this group only by petition and on the recommendation of his college, provided that a timetable may be arranged by the departments concerned without interfering with the hours now assigned to Modern History.

(f) Mathematics (3 hours), Astronomy, Physics, Zoology, Botany, Chemistry, Geology and Mineralogy	4 hours
(g) Household Science	4 "

Notes—(a) Five subjects are to be chosen, not more than two from any one group.

(b) Not more than three subjects may be chosen from groups (a), (b), (c) and Religious Knowledge 3c, 4c, of (d).

(c) A student of the Third Year who has not previously taken Hebrew may, with the consent of his College and of the Council of the Faculty of Arts, substitute Hebrew of the First Year for a language of the Third Year, on condition that he substitute Hebrew of the Second Year for a language of the Fourth Year.

(d) A student who desires to take Psychology in the Third and Fourth Years must have taken that subject in the Second Year. A student who has taken Psychology in the Second Year may take Ethics or History of Philosophy in place of Psychology in the Third and Fourth Years.

A student in the Pass Course who is entitled to register in the Third Year is required to submit to the authorities of his College, his selection of subjects for each of the Third and Fourth Years. Registration cannot be completed until the College has formally approved of his selection

## PRESCRIPTION FOR THE THIRD YEAR PASS COURSE

Greek 3a, p. 83	3 hours
Latin 3a, p. 85	3 "
Hebrew 3b, p. 88	3 "
English 3a, 3b, p. 92	3 "
German 3a, p. 95	3 "
French 3a, p. 97	3 "
Italian 3a or 3e, p. 100	3 "
Spanish 3a or 3d, p. 101	3 "
Greek and Roman History 3a, p. 87	3 "
Ancient Oriental History 3a, p. 90	3 "
History 3a, 3b, p. 103	3 "
Political Economy 3e, p. 112	3 "
Philosophy 3a, p. 118 or †3h, p. 121	3 "
Philosophy 3b, p. 118 or †3f or 3g, p. 121	3 "
Psychology 3a, 3f, pp. 124, 125	3 "
Mathematics I: Mathematics 3a, p. 126	3 "
Mathematics II: Mechanics 3a, p. 129	3 "
Astronomy 3a, p. 131	4 "
Physics 10, p. 133	4 "
Zoology 3, p. 139	4 "
Botany 3, p. 144	4 "
Chemistry 3, 18, p. 152	4 "
Chemistry 3, p. 152 and Food Chemistry 5, p. 149	4 "
Geology and Mineralogy: Geology 3, p. 154, Geology 4, p. 154 or Mineralogy 6, p. 156	4 "
Household Science 3a, p. 157	4 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "

## PRESCRIPTION FOR THE FOURTH YEAR PASS COURSE

Greek 4a, p. 83	3 hours
Latin 4a, p. 85	3 "
Hebrew 4b, p. 88	3 "
English 4a, 4b, p. 92	3 "
German 4a, p. 95	3 "
French 4a, p. 98	3 "
Italian 4a or 4e, pp. 100, 101	3 "
Spanish 4a or 4d, p. 102	3 "
Greek and Roman History 4a, p. 87	3 "
Ancient Oriental History	3 "
History 4a, 4b, 4c, p. 103	3 "
Political Economy 4h, p. 114	3 "

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PRESCRIPTION FOR THE FOURTH YEAR PASS COURSE (*contd.*)

Philosophy 4a, p. 118 or 4i, p. 121	3 hours
Philosophy 4b, pp. 118, 119 or 4g or 4h, p. 121	3 "
Psychology 4a, p. 124	3 "
Mathematics I: Mathematics 4a, 4b, p. 126	3 "
Mathematics II Astronomy 2, 3, p. 131	3 "
Astronomy	4 "
Physics 11, pp. 133, 134	4 "
Zoology 4, p. 139	4 "
Botany 4, p. 144	4 "
Chemistry 2, 26, pp. 151, 152	4 "
Food Chemistry 6, p. 149	4 "
Geology and Mineralogy: Geology 13, 5 or 15 and 16, pp. 154, 155	4 "
Household Science 4a, p. 157	4 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "

## CLASSICS

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Classics must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Greek; Latin; Mathematics (Algebra and Geometry); together with two additional subjects, one of which should be French or German.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
One of German 1a, p. 95	4 "
French 1a, p. 97	4 "
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "

(Candidates who are exempt from Science or German as a Pass subject of the First Year may offer this subject in lieu of Religious Knowledge)

*Greek 1c, p. 83	5 hours
*Latin 1c, p. 86	4½ "
*Greek and Roman History 1, p. 87	1 "

†*St. Michael's College.*

\**Honours.*

## SECOND YEAR

One of English 2a, 2b, p. 92	2 hours
German 2a, p. 95	3 "
French 2a, p. 97	3 "
One of English 2a, 2b, p. 92 (if not already chosen)	2 "
History 2a, 2b, p. 103	3 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Greek 2c, p. 84	5 "
*Latin 2b, p. 86	5½ "
*Greek and Roman History 2b, p. 87	2 "

## THIRD YEAR

One of Greek 3h, p. 84 and Latin 3f, p. 86	1 hour
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 hours
Military Studies 2, p. 161	3 "
*Greek 3b, p. 84	7 "
*Latin 3b, p. 86	6 "
*Greek and Roman History 3b, 3c, p. 87	1 "

## FOURTH YEAR

One of Greek 4h, p. 85 and Latin 4e, p. 87	1 hour
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 hours
Military Studies 3, p. 161	3 "
*Greek 4b, p. 85	7 "
*Latin 4b, p. 86	5 "
*Greek and Roman History 4b, 4c, 4d, p. 87	2 "

## GREEK AND HEBREW

## ENTRANCE CONDITIONS

Every student applying to enter the Honour Course in Greek and Hebrew at the beginning of the Second Year, must obtain at the examination of the First Year in the Pass course, an average of at least 60 per cent. in the subjects which he is required to take, with not less than 66 per cent. in Greek and Hebrew.

Candidates may begin the study of Greek in the First Year under the beginner's course Greek 1b, 2b.

\*Honours.



## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
Latin 1a, p. 85	4 "
Mathematics 1a, 1b, p. 126	2 "
Greek 1a or 1b, p. 83	4 "
Oriental Languages 1b, p. 88	4 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "

Attention is drawn to Section 1, page 164, which applies also to the First Year of this course.

## SECOND YEAR

Greek and Roman History 2a, p. 87	2 hours
One of Latin 2a, p. 85	3 "
English 2a, 2b, p. 92	2 "
German 2a, p. 95	3 "
French 2a, p. 97	3 "
History 2a, 2b, p. 103	3 "
Philosophy 2a, p. 117 or †2c, p. 120	3 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
‡Greek 2a or 2b, 2f, pp. 83, 84	4 "
*Oriental Languages 2c, 2d, p. 89	5 "
*Ancient Oriental History 2c, p. 90	1 "

‡Not less than 66% must be obtained in Greek.

## ORIENTAL LANGUAGES (GREEK OPTION)

## THIRD YEAR

Greek and Roman History 3a, p. 87	3 hours
One of English 3a, 3b, p. 92	3 "
Philosophy 3a, p. 118 or †3b, p. 121	3 "
Philosophy 3b, p. 118 or †3f or 3g, p. 121	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Greek 3c, 3g, p. 84	5 "
*Oriental Languages 3c, 3d, p. 89	5 "
*Ancient Oriental History 3c, p. 90	1 "

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\**Honours.*

FOURTH YEAR

Greek and Roman History 4a, p. 87	3 hours
One of English 4a, 4b, p. 92	3 "
Philosophy 4a, p. 118 or †4i, p. 121	3 "
Philosophy 4b, pp. 118, 119 or †4g or 4h, p. 121	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Greek 4e, 4g, p. 85	5 "
*Oriental Languages 4c, 4d, p. 89	4 "
*Ancient Oriental History 4c, p. 90	1 "

ORIENTAL LANGUAGES

ENTRANCE CONDITIONS

Every student applying to enter the Honour Course in Oriental Languages at the beginning of the Second Year, must obtain at the examination of the First Year in the Pass Course an average of at least 60 per cent. in the subjects which he is required to take, with not less than 66 per cent. in Hebrew. It is recommended that the optional language be either Greek or German.

FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
Latin 1a, p. 85	4 "
Mathematics 1a, 1b, p. 126	2 "
Hebrew 1b, p. 88	4 "
One of Greek and Roman History 1, p. 87	1 "
• Mathematics 1c, p. 126	1 "
§ Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
One of Greek 1a or 1b, p. 83	4 "
German 1a, p. 95	4 "
French 1a, p. 97	4 "
General Science 1, p. 139	3 "

§ Students in this Course, who have not taken Greek previously, and who do not take Greek 1b, 2b, etc., are advised to take Religious Knowledge 1c, and the similar Courses in the subsequent years.

Attention is drawn to Section 1, page 164, which applies also to the First Year of this course.

† *St. Michael's College.*

\* *Honours.*

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of Greek 2a or 2b, p. 83	3 "
Latin 2a, p. 85	3 "
German 2a, p. 95	3 "
French 2a, p. 97	3 "
History 2a, 2b, p. 103	3 "
Greek and Roman History 2a, p. 87	2 "
Philosophy 2a, p. 117 or †2e, p. 120	3 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Oriental Languages 2c, 2d, 2e, 2f, p. 89	9 "
*Ancient Oriental History 2c, p. 90	1 "

## THIRD YEAR

Two of Greek 3a, p. 83 or 3g, p. 84	3 hours
Latin 3a, p. 85	3 "
Greek and Roman History 3a, p. 87	3 "
English 3a, 3b, p. 92	3 "
German 3a, p. 95	3 "
French 3a, p. 97	3 "
History 3a, 3b, p. 103	3 "
Philosophy 3a, p. 118 or †3h, p. 121; or	3 "
Philosophy 3b, p. 118 or †3f or 3g, p. 121	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Oriental Languages 3c, 3d, 3e, 3f, p. 89	8 "
*Oriental Languages, one of 3g, 3h, 3i, p. 89	2 "
*Ancient Oriental History 3c, p. 90	1 "

## FOURTH YEAR

Two of Greek 4a, p. 83 or 4g, p. 85	3 hours
Latin 4a, p. 85	3 "
Greek and Roman History 4a, p. 87	3 "
English 4a, 4b, p. 92	3 "
German 4a, p. 95	3 "
French 4a, p. 98	3 "
History 4a, 4b, p. 103	3 "
Philosophy 4a, p. 118 or †4i, p. 121; or	3 "
Philosophy 4b, pp. 118, 119 or †4g or 4h, p. 121	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Oriental Languages 4c, 4d, 4e, 4f, p. 89	6 "
‡*Oriental Languages, one of 4g, 4h, 4i, p. 89	2 "
*Ancient Oriental History 4c, p. 90	1 "

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‡Students must continue the course selected in the Third Year.

Every candidate in this course shall, during the Fourth Year, present a dissertation on some subject connected with Oriental Languages or Literature, such subject to be previously approved by his instructors in the department. The essay will, on or before the 1st of April in each year, be laid before the instructors in Oriental Languages in University College, Victoria College and Trinity College, who will examine it and assign to it marks according to their judgment of its merit. Such marks will be reported to the Registrar and be taken into account by the examiners in determining the standing of the candidate at the examination of the Fourth Year.

## HEBREW AND ANCIENT HISTORY

### ENTRANCE CONDITIONS

Every student applying to enter the Honour Course in Hebrew and Ancient History at the beginning of the Second Year, must obtain at the examination of the First Year in the Pass Course an average of at least 60 per cent. in the subjects which he is required to take, with not less than 66 per cent. in Hebrew. It is recommended that the student elect either Greek or German or both.

### FIRST YEAR

English 1a, 1b, pp 91, 92	2 hours
Latin 1a, p. 85	4 "
Mathematics 1a, 1b, p. 126	2 "
Hebrew 1b, p. 88	4 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics 1c, p. 126	1 "
§Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
One of Greek 1a or 1b, p. 83	4 "
German 1a, p. 95	4 "
French 1a, p. 97	4 "
General Science 1, p. 139	3 "

§Students in this Course, who have not taken Greek previously, and who do not take Greek 1b, 2b, etc., are advised to take Religious Knowledge 1c, and the similar Courses in the subsequent years

Attention is drawn to Section 1, page 164, which applies also to the First Year of this course.

## SECOND YEAR

One of Greek 2a or 2b, p. 83	3 hours
Latin 2a, p. 85	3 "
German 2a, p. 95	3 "
French 2a, p. 97	3 "
Two of English 2a, 2b, p. 92	2 "
A second language from preceding group	3 "
History 2a, 2b, p. 103	3 "
Philosophy 2a, p. 117 or †2e, p. 120	3 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	3 "
*Greek and Roman History 2a, p. 87	2 "
*Hebrew 2c, 2d, p. 89	5 "
*Ancient Oriental History 2b, p. 90	3 "

## THIRD YEAR

Two of Greek	3 hours
Latin	3 "
English	2 "
German	3 "
French	3 "
History	3 "
Philosophy	3 "
Religious Knowledge	3 "
Military Studies	3 "
*Greek and Roman History 3a, p. 87	2 "
*Hebrew 3c, 3d, p. 89	5 "
*Ancient Oriental History 3b, p. 90	3 "

## FOURTH YEAR

Two of Greek	3 hours
Latin	3 "
English	2 "
German	3 "
French	3 "
History	3 "
Philosophy	3 "
Religious Knowledge	3 "
Military Studies	3 "
*Greek and Roman History 4a, p. 87	2 "
*Hebrew 4c, 4d, p. 89	5 "
*Ancient Oriental History 4b, p. 90	3 "

†*St. Michael's College.*

\**Honours.*

# FRENCH GREEK AND LATIN

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in French Greek and Latin, must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry); two of Greek, English, French; together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

In each year of the Course, French, Greek and Latin are to be taken, two as honour subjects, the third as a pass subject. Candidates taking Greek as their pass subject, may begin the study of Greek in their First Year under the beginner's course, Greek 1b, 2b.

## FIRST YEAR

One of Mathematics 1c, p. 126	1 hour
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
(Candidates who are exempt from Science or German as a Pass subject of the First Year may offer this subject in lieu of Religious Knowledge.)	
One of Greek 1a or 1b, p. 83	4 hours
Latin 1a, p. 85	4 "
French 1a, p. 97	4 "
Two of *Greek 1e, p. 84	5 "
*Latin 1e, p. 86	5 "
*French 1f, 1g, 1h, pp. 98, 99	5 "
*English 1a, 1d, pp. 92, 93	2 "
*Greek and Roman History 1, p. 87	1 "

## SECOND YEAR

One of English 2a, 2b, p. 92	2 hours
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
One of Greek 2a or 2b, p. 83	3 "
Latin 2a, p. 85	3 "
French 2a, p. 97	3 "
Two of *Greek 2e, p. 84	4½"
*Latin 2d, p. 86	4½"
*French 2f, 2g, 2h, p. 99	4½"
One of *Greek and Roman History 2b, p. 87	1 "
*Phonetics, p. 102	1 "

\*Honours.

## THIRD YEAR

One of English 3b, p. 92	3 hours
French 3f, p. 99	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
One of Greek 3a, p. 83	3 "
Latin 3a, p. 85	3 "
French 3a, p. 97	3 "
Two of *Greek 3f, p. 84	6 "
*Latin 3e, p. 86	5 "
*French 3c, 3d, 3e, p. 99	5 "

## FOURTH YEAR

One of English 4b, p. 92	3 hours
French 4g, p. 99	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
One of Greek 4a, p. 83	3 "
Latin 4a, p. 85	3 "
French 4a, p. 98	3 "
Two of *Greek 4f, p. 85	6 "
*Latin 4d, p. 87	5 "
*French 4c, 4d, 4e, 4f, p. 99	5 "

## MODERN LANGUAGES

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Modern Languages must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; French; Mathematics (Algebra and Geometry); one of German, Italian, Spanish; together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

In determining the standing of candidates in English, French, German, Italian and Spanish, examiners will take into account the report of the instructors in the University and Colleges in these subjects.

\*Honours.

FIRST YEAR

One of Mathematics 1c, p. 126	1 hour
General Science 1, p. 139	3 hours
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
Three of *English 1a, 1c, 1d, pp. 92, 93	3 "
*German 1c, 1d, 1e, 1h, p. 95	5 "
*French 1f, 1g, 1h, pp. 98, 99	5 "
*Italian 1a or 1c, 1b, p. 100	4½"
*Spanish 1a or 1d, 1b, p. 101	4½"

Note—Not more than one new language may be begun in this First Year.

SECOND YEAR

One of Philosophy 2a, p. 117 or †2e, p. 120	3 hours
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
Three of *English 2a, 2b, 2c, p. 93	4 "
*German 2c, 2d, 2e, p. 95	4 "
*French 2f, 2g, 2h, p. 99	4 "
*Italian 2a or 2b, p. 100	3 "
*Spanish 2a or 2b, p. 101	3 "
*Phonetics, p. 102	1 "

THIRD YEAR

‡One of German 3c, p. 96	2 hours
French 3f, p. 99	2 "
Italian 3c, p. 100	2 "
Spanish 3c, p. 101	2 "
Philosophy 3b, p. 118 or †3f or 3g, p. 121	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
Two of *English 3a, 3b, 3c, p. 93	5 "
*German 3b, 3c, 3d, p. 95	5 "
*French 3c, 3d, 3e, p. 99	5 "
*Italian 3a and 3b, or 3c, p. 100	5 "
*Spanish 3a and 3b, or 3d, p. 101	5 "

†St. Michael's College.

\*Honours.



## FOURTH YEAR

½ One of German 4g, p. 96	2 hours
French 4g, p. 99	2 "
Italian 4c, p. 101	2 "
Spanish 4c, p. 102	2 "
Philosophy 4b, pp. 118, 119 or †4g or 4h, p. 121	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
Two of *English 4a, 4c, 4b or 4e, p. 94	5 "
*German 4b, 4c, 4d, 4e, p. 96	5 "
*French 4c, 4d, 4e, 4f, p. 99	5 "
*Italian 4a and 4b, or 4e, pp. 100, 101	5 "
*Spanish 4a and 4b, or 4d, p. 102	5 "

½ Students in the *Third Year* selecting German 3e or French 3f or Italian 3c or Spanish 3c, and students in the *Fourth Year* selecting German 4g or French 4g or Italian 4c or Spanish 4c, must choose one of the languages in which they are taking honours.

## ENGLISH AND HISTORY

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in English and History must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry); two of Greek, English, French, German; together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

One of Mathematics 1c, p. 126	1 hour
General Science 1, p. 139	3 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "

(Candidates who have qualified for entrance into this course by obtaining Honour Matriculation standing in three foreign languages may offer one of these languages in lieu of Religious Knowledge.)

*English 1a, 1c, 1d, pp. 92, 93	3 hours
*History 1c, pp. 103, 104	2 "
*Greek and Roman History 1, p. 87	1 "
Two of *Greek 1d, p. 84	4 "
*Latin 1d, p. 86	4 "
*German 1c, 1d, 1e, p. 95	4½ "
*French 1f, 1h, pp. 98, 99	4½ "

†*St. Michael's College.*

\**Honours.*

SECOND YEAR

One of Political Economy 2d, p. 111	1 hour
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 hours
Military Studies 1, p. 161	2 "
*English 2a, 2b, 2c, p. 93	4 "
*History 2d, 2e, pp. 104, 105	3 "
Two of *Greek 2d, p. 84	3 "
*Latin 2c, p. 86	3 "
*German 2c, 2e, p. 95	3 "
*French 2f, 2g, p. 99	3 "

THIRD YEAR

One of Philosophy 3b, p. 118 or †3f or †3g, p. 121	3 hours*
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*English 3a, 3d, 3e, p. 93	5 "
*History 3d, p. 106	1 "
One of *Greek 3c, p. 84	2 "
*Latin 3c, p. 86 and Greek and Roman History 3c, p. 87	3 "
*German 3b, p. 96	3 "
*French 3c, p. 99	2 "
One of *English 3c, p. 93	2 "
*History 3c, p. 106	2 "
*Greek 3d, p. 84 and *History 3f, p. 107	2 "
*Latin 3d, p. 86 and *History 3f, p. 107	2 "

FOURTH YEAR

One of Philosophy 4b, pp. 118, 119 or †4g or 4h, p. 121	3 hours
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Greek 4c, p. 85 (Aristotle's Poetics, in English)	1 "
*English 4a, 4b, 4d, 4e, p. 94	7 "
*History 4e, p. 107	1 "
One of *English 4c, p. 94	2 "
*History 4d, p. 107	2 "
*Greek 4d, p. 85 and *Political Economy 4e, pp. 113, 114	2 "
*Latin 4c, p. 87 and *Political Economy 4e, pp. 113, 114	2 "

†*St. Michael's College.*

\**Honours.*

## MODERN HISTORY

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Modern History must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry); History; French or German; together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

A student who has obtained complete standing at the examination of the First Year in the Pass Course with an average of 66 per cent. in at least four subjects, may enter the Second Year of the Honour Course in Modern History.

The entrance conditions and the First Year Course in Modern History are the same as those required for the Political Science Course. A student may thus choose at the end of his First Year whether he will proceed in the Modern History Course or in the Political Science Course.

Students should consult the staff of the department before selecting their options in the First Year. An adviser of studies will be present in Baldwin House from 10 a.m. to 4 p.m. from September 25th to the close of registration.

## FIRST YEAR

One of Greek and Roman History 1, p. 87	2 hours
Mathematics 11, p. 127	2 "
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*English 1a, 1b, pp. 91, 92	2 "
One of *Latin 1d, p. 86	4 "
*German 1c, 1d, p. 95	4 "
*French 1f, pp. 98, 99	4 "
*Italian 1a or 1c, p. 100	4 "
*Spanish 1a or 1d, p. 101	4 "
*History 1c, 1d, pp. 103, 104	3 "
*Political Economy 1a, 1b, pp. 109, 110	4 "

## SECOND YEAR

One of History 2h, pp. 105, 106	2 hours
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*English 2a, 2b, 2c, p. 93	4 "
*History 2c or 2d, 2e, 2f, pp. 104, 105	5 "
*Political Economy 2a, p. 110	3 "

\*Honours

## THIRD YEAR

One of English 3a, 3b, p. 92	3 hours
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*History 3c, 3d, 3e, 3f, pp. 106, 107	7 "
*Political Economy 2b, pp. 110, 111	3 "
One of *English 3d, p. 93	2 "
*History 3g, p. 107	2 "

## FOURTH YEAR

One of English 4a, 4b, p. 92	3 hours
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*History 4d, 4e, 4f, 4g, pp. 107, 108	5 "
One of *English 4d, p. 94	2 "
*History 4h, p. 108	2 "
*Political Economy 4e, pp. 113, 114	2 "

## POLITICAL SCIENCE

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Political Science must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin, Mathematics (Algebra and Geometry); History; French or German; together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

A student who has obtained complete standing at the examination of the First Year in the Pass Course with an average of 66 per cent. in at least four subjects, may enter the Second Year of this Honour Course.

The entrance conditions and the First Year course in Political Science are the same as those required for the Modern History course. A student may thus choose at the end of his First Year whether he will proceed in the Political Science course or in the Modern History course.

Students should consult the staff of the department before selecting their options in the First Year. An adviser of studies will be present in Baldwin House from 10 a.m. to 4 p.m. from September 25th to the close of registration.

## FIRST YEAR

One of Greek and Roman History 1, p. 87	2 hours
Mathematics 1i, p. 127	2 "
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*English 1a, 1b, pp. 91, 92	2 "
One of *Latin 1d, p. 86	4 "
*German 1c, 1d, p. 95	4 "
*French 1f, pp. 98, 99	4 "
*Italian 1a or 1c, p. 100	4 "
*Spanish 1a or 1d, p. 101	4 "
*History 1c, 1d, pp. 103, 104	3 "
*Political Economy 1a, 1b, pp. 109, 110	4 "

## SECOND YEAR

One of Philosophy 2a, p. 117 or †2e, p. 120	3 hours
Mathematics 2g, p. 127	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*History 2g, p. 105	2 "
*Political Economy 2a, 2b, 2c, pp. 110, 111	9 "

## DIVISION I—THIRD YEAR—ECONOMICS

One of Philosophy 3a, p. 118 or †4i, p. 121	3 hours
Philosophy 3c, p. 118 and Psychology 3b, p. 124	3 "
Mathematics, 3c, p. 126	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Political Economy 3a, 3b, 3c, 3d, pp. 111, 112	12 "

## DIVISION I—FOURTH YEAR—ECONOMICS

One of Philosophy 4a, p. 118 or †4o, p. 123	3 hours
Psychology 4b, p. 124	3 "
Mathematics, 4d, p. 126	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Political Economy 4a, 4e, 4i, pp. 113, 114	7 "
Two of *Political Economy 4b, p. 113; 4c, p. 113; 4f, p. 114	4 "

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\**Honours.*

DIVISION II—THIRD YEAR—POLITICS AND LAW

One of Philosophy 3a, p. 118 or †4i, p. 121	3 hours
Philosophy 3c, p. 118 and Psychology 3b, p. 124	3 "
Mathematics, 3c, p. 128	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*History 2f, 3e, pp. 105-107	4 "
*Political Economy 3a or 3d, pp. 111, 112	3 "
*Law 3a, 3b, 3c, 3d, pp. 114, 115	5 "

DIVISION II—FOURTH YEAR—POLITICS AND LAW

One of Philosophy 4a, p. 118 or †4o, p. 123	3 hours
Psychology 4b, p. 124	3 "
Mathematics, 4d, p. 126	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*History 4f, p. 108	1 "
*Political Economy 4e, 4b or 4c or 4f, pp. 113, 114	5 "
*Law 4a, 4b, 4c, 4d, pp. 115, 116	6 "

COMMERCE AND FINANCE

The course in Commerce and Finance and the Course in Commerce have been amalgamated. The new course, called hereafter Commerce and Finance, leads only to the Bachelor of Commerce degree. Consequently the Arts course of Commerce and Finance will cease to exist after the present session.

FOURTH YEAR

English 4a, 4b, p. 92	3 hours
One of Latin 4a, p. 85	3 "
German 4a, p. 95	3 "
French 4a, p. 98	3 "
Physics 11, pp. 133, 134	4 "
Chemistry 7, 8, 25, p. 152	6 "
Geology and Mineralogy: Geology 13, 5 or 15 and 16, pp. 154, 155	4 "
One of History 4a, 4b, 4c, p. 103	3 "
Actuarial Science 3b, 3c, p. 130	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
World History 1 or 2, p. 160	2 "
Military Studies 3, p. 161	3 "
*Political Economy 2b, 4a, pp. 110-113	5 "
*Law 4e, p. 116	1 "
Two of *Political Economy 4b, p. 113; 4c, p. 113, 3d, p. 112, 4e, pp. 113, 114; 4f, p. 114; *Actuarial Science 4a, p. 124	4 "

†*St. Michael's College.*

\**Honours*

## PHILOSOPHY

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Philosophy must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; English; Mathematics (Algebra and Geometry), one of History, Greek, French, German, Physics, together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance requirements, must do so at the examination of the First Year. See Sections 33-35, p. 19.

A student who has obtained complete standing at the examination of the First Year in the Pass Course with an average of 66 per cent. in at least four subjects may enter the Second Year of the Honour Course in Philosophy.

## FIRST YEAR

General Science 1, p. 139	3 hours
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
One of *Greek 1f, p. 84	4 "
*Latin 1d, p. 86	4 "
*Hebrew 1b, p. 88	4 "
*German 1c, 1d, p. 95	4 "
*French 1f, pp. 98, 99	4 "
*Greek and Roman History 1, p. 87	1 "
*English 1a, 1b, p. 91, 92	2 "
*Philosophy 1a, p. 119 or †1b, p. 121	2 "

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of Greek 2a or 2b, p. 83	3 "
Greek and Roman History 2a, p. 87	2 "
Hebrew 2b, p. 88	3 "
History 2a, 2b, p. 103	3 "
Philosophy 5, p. 120	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Philosophy 2b, 2c, 2d, p. 119 or †2f, 2g, 2h, 2i, 2l, pp. 121, 122	5 "
*Psychology 2d, 2f, 2g, pp. 124, 125 or †*Philosophy 2j, 2k, p. 122	3 "

†*St. Michael's College.*

\**Honours.*

THIRD YEAR

One of English 3a, 3b, p. 92	3 hours
Greek 3a, p. 83	3 "
Hebrew 3b, p. 88	3 "
Philosophy 5, p. 120	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
Political Economy 3f, p. 113	2 "
*Philosophy 3d, 3e, 3f, pp. 119, 120 and *Psychology 3c, 3f, pp. 124, 125; or	9 "
*†Philosophy 3i, 3j, 3k, 3l, 3m, 3n, 3o, pp. 122, 123 and	10 "
*†Psychology 1, p. 123	1 "

FOURTH YEAR

One of English 4a, 4b, p. 92	3 hours
Greek 4a, p. 83	3 "
Hebrew 4b, p. 88	3 "
Political Economy 4e, pp. 113, 114	2 "
Philosophy 5, p. 120	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Philosophy 4c, 4d, 4e, 4f, 4g, p. 120 and *Psychology 4c, p. 125, or	11 "
*†Philosophy 4j, 4k, 4l, 4m, 4n, 4o, 4p, 4q, 4r, p. 123	11 "

PHILOSOPHY (ENGLISH OR HISTORY OPTION)

ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Philosophy (English or History Option) must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry); one of History, English, Physics; one of Greek, French, German, together with an additional subject.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance requirements, must do so at the examination of the First Year. See Sections 33-35, p. 19.

†*St. Michael's College.*

\**Honours.*



## FIRST YEAR

General Science 1, p. 139	3 hours
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
One of *Greek 1f, p. 84	4 "
*Latin 1d, p. 86	4½ "
*Hebrew 1b, p. 88	4 "
*German 1c, 1d, p. 95	4 "
*French 1f, pp. 98, 99	4 "
*Greek and Roman History 1, p. 87	1 "
*English 1a, 1c, 1d, pp. 92, 93	3 "
*History 1c, pp. 103, 104	2 "
*Philosophy 1a, p. 119 or †1b, p. 121	2 "

## SECOND YEAR

Political Economy 2d, p. 111	1 hour
Psychology 2a, 2f, pp. 124, 125 or †Philosophy 2l, p. 122	3 "
One of Philosophy 5, p. 120	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*English 2a, 2b, 2c, p. 93	4 "
*History 2d, 2e, pp. 104, 105	4 "
*Philosophy 2c, 2d, p. 119, or †2f, 2g, 2h, pp. 121, 122	3 "

## THIRD YEAR

One of Philosophy 5, p. 120	3 hours
Psychology 3a, 3f, pp. 124, 125 or †Philosophy 3l, p. 122	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
One of *English 3a, 3d, 3e, p. 93	5 "
*History 3c, 3d, p. 106	4 "
*Philosophy 3d, 3e, 3f, pp. 119, 120 or †3i, 3j, 3m, 3o, pp. 122, 123	6 "

## FOURTH YEAR

One of Political Economy 4e, pp. 113, 114	2 hours
Philosophy 5, p. 120	3 "
Psychology 4a, p. 124 or †Philosophy 4m, 4n, p. 123	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
One of *English 4a, 4b, 4d, p. 94	5 "
*History 4d, 4e, p. 107	3 "
*Philosophy 4c, 4e or 4g, p. 120 or †4j, 4k, 4l, 4o, 4p, p. 123	4 "

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\**Honours.*

## PSYCHOLOGY

The Entrance Conditions and the First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
One of Political Economy 2d, p. 111	1 "
Mathematics 1r, 1s, p. 128	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Philosophy 2c, p. 119	2 "
*Psychology 2d, 2f, 2g, pp. 124, 125	4 "
*Physics 3b, 4, 5, 6 part, pp. 132, 133	5 "
*Zoology 7 part, pp. 139, 140	4 "

## THIRD YEAR

A reading knowledge of French and German for scientific purposes.

Two of Political Economy 3f, p. 113	3 hours
Mathematics 2r, p. 128	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Philosophy 3f, pp. 119, 120	2 "
*Psychology 3c, 3f, 3g, pp. 124, 125	8 "
*Anatomy 4, p. 147	4 "
*Physiology 4 (a) and (c), p. 150	4 "

## FOURTH YEAR

A reading knowledge of French and German for scientific purposes.

One of Political Economy	3 hours
Religious Knowledge	3 "
Military Studies	3 "
*Philosophy	2 "
*Psychology	14 "
*Zoology	2 "

## MATHEMATICS

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Mathematics must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry, Trigonometry); Physics; and French or German.

\*Honours.

It is recommended that French be taken at Matriculation, but it is to be kept in mind that a reading knowledge of both German and French will be necessary in the Third and Fourth Years.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

#### FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
One of German 1a, p. 95	4 "
French 1a, p. 97	4 "
One of Greek and Roman History 1, p. 87	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*Mathematics 1g, 1h, 1i, 1j, pp. 126, 127	6½"
*Actuarial Science 1a, p. 129	1 "
*Physics 1, 2, p. 132	6 "
*Chemistry 1, 14, pp. 151, 152	4 "

#### SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
One of History 2a, p. 103	2 "
Political Economy 2a, p. 110	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Mathematics 2h, 2i, 2j, 2k, p. 127	9 "
*Mechanics 2a, p. 129	1 "
*Actuarial Science 2b, p. 130	2 "
*Physics 4, 5, 6 part, pp. 132, 133	4½"

#### THIRD YEAR

One of History 3a, p. 103	2 hours
Political Economy 3b, pp. 111, 112	3 "
Mathematics 3b, p. 126 and Physics 29 part, pp. 135, 136	1 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Mathematics 3g, 3h (without examination), 3i, 3j, 3k, p. 127	9 "
*Mechanics 3b, 3c, p. 129	3 "
One of *Actuarial Science 3a, 3d, p. 130	2 "
*Astronomy 2, 3, p. 131	4 "
*Physics 3a, 6 part, pp. 132, 133	3½"

\*Honours.

## FOURTH YEAR

One of History 4a, 4b, p. 103	2 hours
Political Economy 4c, p. 113	2 "
Mathematics 4c, p. 126 and Physics 29 part, pp. 135, 136	1 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	2 "
Military Studies 3, p. 161	3 "
One of *Mathematics 4k, p. 128	2 "
*Mechanics 4a, p. 129	2 "
*Actuarial Science 4a, p. 130	2 "
*Astronomy 4, p. 131	2 "
*Physics, one of 12, 13, 20, 21, 26 part; or two of 14, 15, 22, 23, 24, pp. 134, 135	2 "
Three of *Mathematics 4g, 4h, 4j, 4p, p. 128	9 "

## MATHEMATICS AND PHYSICS

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Mathematics and Physics must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry, Trigonometry); Physics; and French or German.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
One of German 1a, p. 95	4 "
French 1a, p. 97	4 "
One of Greek and Roman History 1, p. 87	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*Mathematics 1g, 1i, 1j, 1k, pp. 126, 127	5 "
*Actuarial Science 1a, p. 129	1 "
*Physics 1, 2, 18 part, pp. 132, 134	7 "
*Chemistry 1, 14, pp. 151, 152	4 "

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
One of History 2a, p. 103	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "

\*Honours.

SECOND YEAR—*Continued.*

*Mathematics 2h, 2i, 2j, p. 127	6 hours
One of *Mathematics 2k part, p. 127	1 "
*Actuarial Science 2b, p. 130	2 "
*Mechanics 2a, p. 129	1 "
*Physics 3a, 4, 5, 6, p. 132, 133	9 "

## THIRD YEAR

One of History 3a, p. 103	2 hours
Mathematics 3b, p. 126 and Physics 29 part, pp. 135, 136	1 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
World History 1 or 2, p. 160	2 "
Military Studies 2, p. 161	3 "
*Mathematics 3g, 3h (without examination), p. 127	2 "
Two of *Actuarial Science 3a, 3d, p. 130	2 "
*Physics 14, p. 134	1 "
*Physics 15, p. 134	1 "
*Mechanics 3b, 3c, 4a, p. 129	3 "
*Astronomy 2, 3, p. 131	4 "
*Physics 12, 13, 17, p. 134	9½ "

## FOURTH YEAR

One of History 4a, 4b, p. 103	2 hours
Mathematics 4c, p. 126 and Physics 29 part, pp. 135, 136	1 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	2 "
World History 1 or 2, p. 160	2 "
Military Studies 3, p. 161	3 "
One of the following divisions:	
<i>Division I—Mathematics</i>	
Five of *Mathematics 4g, 4h, 4i, 4j, 4k, 4m, 4n, p. 128,	
*Astronomy 4, p. 131, the choice to be determined	
by the Department	10 hours
One of *Mathematics 4l, p. 128	1 "
*Actuarial Science 4a, p. 130	2 "

*Division II—Physics*

One of *Mechanics 4c, p. 129	¾ "
*Mineralogy 3, p. 156	1 "
*Physics 20, 21, 22 or 24, 23, 25, 26, 27, pp. 134, 135	17 "

\*Honours.

†Division III—Astronomy and Physics

*Mathematics 4b, p. 128	2 hours
*Mechanics 4b, 4c, p. 129	2½"
*Astronomy 4, 5, 6, 7, 8, p. 131	15½"
*Physics 20, 27 ( <i>Light</i> ), pp. 134, 135	4 "

Candidates in the Astronomy and Physics Division are required to take the lectures of Course 20 during the Michaelmas Term and laboratory work in Optics of Course 27 for two afternoons a week during the Michaelmas Term.

†*Students may qualify for admission to Division III of the Fourth Year of this course by completing the first three years of the Honour Course in Mathematics.*

# SCIENCE

## ENTRANCE CONDITIONS

It is to be noted that the Entrance Conditions and First Year prescription are common to all the following Science Courses: Physics, Biology, Physiology and Biochemistry, Biological and Medical Sciences, Chemistry, Chemistry Mineralogy and Geology, Geology and Mineralogy, Science (General) and Psychology

A candidate for admission to the First Year of any of the above Honour Courses must present, in addition to complete Pass Matriculation standing, certificates giving him credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry, Trigonometry); French or German; and one of Physics, Zoology, Botany, Chemistry.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
German 1b, p. 95	2 "
French 1b, p. 97	2 "
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*Physics 1, 2, 18, pp. 132, 134	6½"
*Zoology 5, 6, p. 139	3¼"
*Botany 5, 6, p. 144	3¼"
*Chemistry 1, 13, pp. 151, 152	6½"
*Geology and Palaeontology 1, p. 153	1 "

\*Honours.

## PHYSICS

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

One of English 2a, 2b, p. 92	2 hours
German 2b, p. 95	2 "
French 2b, p. 97	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
A reading knowledge of French and German for scientific purposes.	
*Mathematics 1i, 2g, p. 127	4 "
*Physics 3a, 4, 5, 6, pp. 132, 133	9 "
*Chemistry 3, 7, 15, 24, p. 152	8 "

## THIRD YEAR

A student in the Faculty of Arts who has completed the Second Year in the Honour Course of Mathematics or Chemistry or Chemistry Mineralogy and Geology, may enter the Third Year of the Honour Course in Physics.

A student in the Faculty of Applied Science and Engineering, who has passed the examination of the First and Second Years with honours in any one of the Departments of Civil, Mining, Mechanical, Chemical, Electrical and Metallurgical Engineering, may enter the Third Year of the Honour Course in Physics, provided that he has met the language requirements of the First Year of that course with respect to Latin, English and French or German at the Honour Matriculation or equivalent examination.

One of Physics 29 part, pp. 135, 136	1 hour
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 hours
Military Studies 2, p. 161	3 "
A reading knowledge of French and German for scientific purposes.	
*Mathematics 2j first half, 3g, p. 127	2 "
*Mechanics 3b, 3c, p. 129	3 "
*Physics 12, 13, 14, 15, 17, p. 134	11 "

## FOURTH YEAR

One of Physics 29 part, pp. 135, 136	1 hour
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Mechanics 4a, p. 129	2 "
One of *Mechanics 4c, p. 129	$\frac{1}{2}$ "
*Mineralogy 3, p. 156	1 "
*Physics 20, 21, 22 or 24, 23, 25, 26, 27, pp. 134, 135	17 "

\*Honours.

# BIOLOGY

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
†One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Physics 3b, 4, 5, 6, pp. 132, 133	7 "
*Zoology 9, p. 140	4 "
*Botany 7, 9, p. 144	4 "
*Chemistry 3, 7, 15, 24, p. 152	8 "
*Geology and Palaeontology 6, 7, p. 154	3 "

## THIRD YEAR

One of English 3a, 3b, p. 92	3 hours
Astronomy 2, p. 131	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Zoology 7, 8, 12, 13, pp. 139, 140	9 "
*Botany 12, 19, pp. 145, 146	9 "
*Biochemistry 1, 3, p. 148	7 "

## FOURTH YEAR

One of Zoology 15a, p. 140 (History of Biological Science)	2 hours
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 180	3 "
Military Studies 3, p. 161	3 "
*Zoology 19, p. 141	
*Botany 16, p. 145	
*Zoology 15, p. 140 or *Botany 20, p. 146	

A selection of twenty hours from the following divisions, subject to the approval of the Department and the conditions set forth below:

### *Division I—Zoology*

\*Zoology 14, 16, 17, 18 and 18a, 20, 21, 22, 23, pp. 140, 141 each 4 hours

### *Division II—Botany*

\*Botany 10 or 11, 12, 18, 19, 20a, 22, 8 and 15, 8 and 23, pp. 144-146 each 4 hours

At least one course must be taken in each division. The four remaining courses may be taken in one or both divisions.

### *\*Honours.*

†The selection of the language must be approved by the Staff in Biology.



Special work in one subject already selected may be substituted for one course otherwise necessary.

Students may in exceptional cases substitute for one of the courses a course of corresponding standard in another department.

Note—Students proceeding to graduate or special work, in which an acquaintance with the original literature is required, are advised to seek proficiency in reading scientific French and German during their undergraduate course.

## PHYSIOLOGY AND BIOCHEMISTRY

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

The curriculum of this course in the First and Second Years is the same as that for Biological and Medical Sciences (the combined course in Arts and Medicine). During the Third and Fourth Years the curriculum is arranged for specialization in Physiology and Biochemistry *without special reference to Medicine*.

### SECOND YEAR

English 2a, 2b, p. 92	2 hours
Mathematics 1r, 1s, p. 128	2 "
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Physics 3b, 4, 5, 6, pp. 132, 133	7 "
*Zoology 7, 8, pp. 139, 140	7 "
*Chemistry 3, 7, 15, 24, p. 152	8 "

### THIRD YEAR

One of †Astronomy 2, p. 131	2 hours
†Zoology 15a, p. 140 (History of Biological Science)	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
Mathematics 2r, p. 128	2 "
A reading knowledge of Scientific French or German.	
*Physics 25, p. 135	3/4 "
*Zoology 27, 29, p. 142	6 "
*Biochemistry 1, 3, p. 148	7 "
*Physiology 1, 2, 5, p. 150	7 "
*Chemistry 4, 10 part, p. 152	8 "

†If either of these subjects is taken in the Third Year it cannot constitute an option in the Fourth Year.

\*Honours.

FOURTH YEAR

One of †Astronomy 2, p. 131	2 hours
†Zoology 15a, p. 140 (History of Biological Science)	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
A reading knowledge of Scientific French or German	
Mathematics 3r, p. 128	2 "
*Physics 19, p. 134	2 "
*Botany 19, p. 146	4 "
One of the following divisions:	
<i>Division I—Biochemistry</i>	
*Chemistry 20 part, p. 152	3 hours
*Biochemistry 2, 4, 5, p. 148	8 "
*Special work in Biochemistry or Zymology or Organic Chemistry or Physical Chemistry	10 "
<i>Division II—Physiology</i>	
*Biochemistry 2, 4 part, p. 148	5 "
*Physiology 3, 4, 6, 8, p. 150	18 "
†If either of these subjects is taken in the Third Year it cannot constitute an option in the Fourth Year.	

BIOLOGICAL AND MEDICAL SCIENCES

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

SECOND YEAR

English 2a, 2b, p. 92	2 hours
Mathematics 1r, 1s, p. 128	2 "
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
†Psychology 2c, p. 124	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Physics 3b, 4, 5, 6, pp. 132, 133	7 "
*Zoology 7, 8, pp. 139, 140	7 "
*Biochemistry 3 part, p. 148	1 "
*Chemistry 3, 7, 15, 24, p. 152	8 "

THIRD YEAR

One of †Psychology 3e, p. 125	2 hours
Mathematics 2r, p. 128	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Anatomy 1, 2, 3, p. 147	18 "
*Biochemistry 1, 3 continued, p. 148	6 "
*Physiology 2, 4 part, 5, p. 150	7 "

\*Honours.

## FOURTH YEAR

One of †Psychology	2 hours
Mathematics 3r, p. 128	2 "
Zoology 15a, p. 140 (History of Biological Science)	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Anatomy 4, 5, p. 147	9½"
*Biochemistry 2, 5, p. 148	4 "
*Physiology 1, 3, 4 continued, 6, 8, p. 150	7 "
*Bacteriology: Third Year course in the Faculty of Medicine	5½"
*Special work in one subject to be arranged with head of department of subject elected by student	5 "

†A student desiring to take special honour work in Psychology in the Fourth Year must have credit for Psychology 2c and 3e before he enters the Fourth Year. A student who was unable to take Psychology 2c in the Second Year, may with the consent of the staff, take that course in the Third Year instead of Psychology 3e which he must then take in the Fourth Year.

Under the regulations of the Faculty of Medicine a student who has been awarded a Pass Degree in this course will not be permitted to register in the Fourth Year in the above faculty.

## CHEMISTRY

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
†One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
One of Chemistry 6b, p. 152	
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Mathematics 2g, p. 127	2 "
*Physics 3a, 4, 5, pp. 132, 133	3 "
*Chemistry 3, 7, 9, 16, 17, p. 152	
*Mineralogy and Petrography 1, 2, pp. 155, 156,	2 "

\*Honours.

†Selection to be approved by the Staff in Chemistry.

## THIRD YEAR

A reading knowledge of French and German for scientific purposes.

One of Chemistry 6b, p. 152

Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160 3 hours

Military Studies 2, p. 161 3 "

\*Mathematics 3g, p. 127 1 "

\*Chemistry 4, 8, 10, 12a, 12b, 19, 20, p. 152

\*Mineralogy and Petrography 3, p. 156 1 "

## FOURTH YEAR

A reading knowledge of French and German for scientific purposes.

One of Chemistry 6b, p. 152

Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160 3 hours

Military Studies 3, p. 161 3 "

\*Chemistry 5, 6a, 11, 21, p. 152

## CHEMISTRY MINERALOGY AND GEOLOGY

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

English 2a, 2b, p. 92 2 hours

†One of German 2b, p. 95 2 "

French 2b, p. 97 2 "

One of Chemistry 6b, p. 152

Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159 2 "

Military Studies 1, p. 161 2 "

\*Mathematics 2g, p. 127 2 "

\*Physics 3a, 4, 5, pp. 132, 133 3 "

\*Chemistry 3, 7, 9, 16, p. 152

\*Geology and Palaeontology 6, 7, p. 154 3 "

\*Mineralogy and Petrography 1, 3, 4, pp. 155, 156 5 "

## DIVISION I—THIRD YEAR—CHEMISTRY AND MINERALOGY

A reading knowledge of French and German for scientific purposes.

One of History 3a, p. 103 2 hours

Chemistry 6b, p. 152

Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160 3 "

Military Studies 2, p. 161 3 "

\*Honours.

†Selection to be approved by the Staff in Chemistry Mineralogy and Geology.

THIRD YEAR—*Continued.*

*Mathematics 3g, p. 127	1 hour
*Physics 6, p. 133	6 hours
*Chemistry 4, 8, 10, 12a, 19, 20, p. 152	
*Mineralogy and Petrography 6, p. 156	2 "

## DIVISION I.—FOURTH YEAR—CHEMISTRY AND MINERALOGY

A reading knowledge of French and German for scientific purposes.

One of History 4a, 4b, p. 103	2 hours
Chemistry 6b, p. 152	
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
*Physics 16, p. 134	$\frac{3}{4}$ "
One of *Zoology 9, 12, p. 140, and *Botany 7, 9, p. 144	4 "
A defined part of *Chemistry 21, p. 152	
*Chemistry 5, 6a, 11, 21, p. 152	

## DIVISION II.—THIRD YEAR—MINERALOGY AND GEOLOGY

One of English 3a, 3b, p. 92	3 hours
Astronomy 2, p. 131	2 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
A reading knowledge of French and German for scientific purposes.	
*Physics 6, p. 133	6 "
*Chemistry 8, p. 152	
*Geology and Palaeontology 8, 9, 10, 11, 25, pp. 154, 155	$9\frac{1}{2}$ "
*Mineralogy and Petrography 5, 6, 7, 8, 11, p. 156	10 "

## DIVISION II.—FOURTH YEAR—MINERALOGY AND GEOLOGY

One of English 4a, 4b, p. 92	2 hours
Mineralogy 15, p. 156	2 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
A reading knowledge of French and German for scientific purposes.	
*Physics 33, p. 136	3 "
One of *Zoology 9, 12, p. 140	4 "
*Botany 7, 9, p. 144	4 "
*Geology and Palaeontology 14, 16, p. 155	5 "
*Geology and Palaeontology 12, 13, 15, 20, pp. 154, 155	5 "
*Mineralogy and Petrography 9, 10, 12, 13, 14, 17, pp. 156, 157	$14\frac{1}{2}$ "
*Honours.	

GEOLOGY AND MINERALOGY

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

SECOND YEAR

English 2a, 2b, p. 92	2 hours
†One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
One of Geology and Palaeontology 17, p. 155	1 "
Mathematics 2g, p. 127	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Physics 3b, 4, 5, 6, pp. 132, 133	7 "
*Zoology 9, p. 140	4 "
*Botany 7, p. 144	3 "
*Chemistry 3, 7, 15, 24, p. 152	8 "
*Geology and Palaeontology 6, 7, p. 154	3 "
*Mineralogy and Petrography 1, 2, pp. 155, 156	2 "

THIRD YEAR

One of English 3a, 3b, p. 92	3 hours
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies, 2, p. 161	3 "
††A reading knowledge of French and German for scientific purposes.	
*Chemistry 17, p. 152	
*Geology and Palaeontology 8, 9, 10, 11, p. 154	9 "
*Mineralogy and Petrography, 3, 4, 6, 8, 11, p. 156	9 "

FOURTH YEAR

One of English 4a, 4b, p. 92	3 hours
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
Military Studies 3, p. 161	3 "
††A reading knowledge of French and German for scientific purposes.	
One of *Zoology 23 part, p. 141	3 "
*Botany 18, p. 146	3 "
*Geology and Palaeontology 14, p. 155 and *Mineralogy and Petrography 14, p. 156	3 "
*Geology and Palaeontology 12, 13, 15, 16, 18, 19, 20, 22, 23, 24, 25, pp. 154, 155	16 "
*Mineralogy and Petrography 5, 12, 13, p. 156	7 "

\*Honours.

†Selection to be approved by the Staff in Geology and Mineralogy.

††Proficiency in both languages is required.

## SCIENCE (GENERAL)

The Entrance Conditions and First Year prescription of this course will be found under the course in Science, page 192.

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of German 2b, p. 96	2 "
French 2b, p. 97	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
Military Studies 1, p. 161	2 "
*Mathematics 2g, p. 127	2 "
*Physics 3b, 6 part, pp. 132, 133	4 "
*Zoology 9, p. 140	4 "
*Botany 7, 9, p. 144	4 "
*Chemistry 7, 15, p. 152	6 "
*Geology and Palaeontology 6, 7, p. 154	3 "
*Mineralogy and Petrography 1, 2, pp. 155, 156	2 "

## THIRD YEAR

One of History 3a, p. 103	2 hours
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
Military Studies 2, p. 161	3 "
*Astronomy 2, p. 131	2 "
*Physics 4, 5, 6 part, 13, 17 part, pp. 132-134	8 "
*Zoology 7 part, 12, pp. 139, 140	3 "
*Botany 19, p. 146	4 "
*Chemistry 3, p. 152	2 "
*Geology and Palaeontology 8, p. 154	2 "
*Mineralogy and Petrography 3, 4, p. 156	4 "

## FOURTH YEAR

One of History 4a, 4b, p. 103	2 hours
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	2 "
Military Studies 3, p. 161	3 "
*Astronomy 3, p. 131	2 "
*Physics (to be selected)	4 "
*Zoology 23, p. 141 or *Botany 12, p. 145	4 "
*Chemistry 8, 25, p. 152	4 "
*Geology and Palaeontology 13, 18, pp. 154, 155 }	4 "
*Mineralogy and Petrography 6 part, 11, p. 156 }	
One of *Physics (to be selected)	4 "
*Zoology 23, p. 141	4 "
*Botany 10 or 12, 20, pp. 145, 146	4 "
*Chemistry (to be selected)	4 "
*Geology and Palaeontology 15, 16, p. 155	4 "
*Mineralogy and Petrography 9, 12, 14, p. 156	4 "

\*Honours.

## HOUSEHOLD SCIENCE

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Household Science must present, in addition to complete Pass Matriculation standing, certificates giving her credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin Mathematics (Algebra and Geometry, Trigonometry); French or German; and one of Physics, Zoology, Botany, Chemistry.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
German 1b, p. 95	2 "
French 1b, p. 97	2 "
One of Mathematics 1c, p. 126	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*Physics 1, 2, 18, pp. 132, 134	6½"
*Zoology 5, 6, p. 139	3¼"
*Botany 5, 6, p. 144	3¼"
*Chemistry 1, 13, pp. 151, 152	6½"
*Household Science 1b, p. 157	1 "

## SECOND YEAR

English 2a, 2b, p. 92	2 hours
One of German 2b, p. 95	2 "
French 2b, p. 97	2 "
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
*Physics 3b, 4, 5, 6, p. 132, 133	7 "
*Zoology 10, p. 140	2 "
*Botany 13, p. 145	2 "
*Chemistry 3, 7, 15, 24, p. 152	8 "
*Household Science 2a part, p. 157	6 "

## THIRD YEAR

One of English 3a, 3b, p. 92	3 hours
Philosophy 3a, p. 118 or †3g, p. 121	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
*Biochemistry 1, 3, p. 148	7 "
*Physiology 2, 5, p. 150	4 "
*Household Science 3b, p. 157	12 "
*Hygiene and Sanitation	1 "

†*St Michael's College.*

\**Honours.*



## FOURTH YEAR

One of English 4a, 4b, p. 92	3 hours
Philosophy 4a, p. 118 or †4h, p. 121	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
*Food Chemistry 1, 3, p. 149	10 "
*Household Science 4b, 4c, 4d, p. 157	10 "

## HOUSEHOLD ECONOMICS

## ENTRANCE CONDITIONS

A candidate for admission to the First Year of the Honour Course in Household Economics must present, in addition to complete Pass Matriculation standing, certificates giving her credit at the Honour Matriculation or an equivalent examination in the following five subjects—Latin; Mathematics (Algebra and Geometry); two of English, French or German, Physics, Zoology, Botany, Chemistry; together with an additional subject, the candidate is recommended to take French or German and a Science.

A student admitted to this course on probation by special petition, who has not fulfilled all the entrance conditions, must do so at the examination of the First Year. See Sections 33-35, p. 19.

## FIRST YEAR

English 1a, 1b, pp. 91, 92	2 hours
One of German 1a, p. 95	4 "
French 1a, p. 97	4 "
One of Household Science 1a, p. 157	1 "
Religious Knowledge 1a or 1b or 1c or 1d, p. 159	1 "
*Physics 28, p. 135	4 "
*Zoology 5, 6, p. 139	3¼"
*Botany 5, 6, p. 144	3¼"
*Chemistry 1, 13, pp. 151, 152	6½"
*Household Science 1b, p. 157	1 "

## SECOND YEAR

One of English 2a, 2b, p. 92	2 hours
Religious Knowledge 2a or 2b or 2c or 2d or 2e, p. 159	2 "
One of German 2a, p. 95	3 "
French 2a, p. 97	3 "
*Zoology 10, p. 140	2 "
*Botany 13, p. 145	2 "
*Chemistry 3, 15 part, p. 152	4 "
*Household Science 2a, p. 157	10 "
*Physiology 9, p. 150	1 "

†*St. Michael's College*

\**Honours.*

THIRD YEAR

Philosophy 3a, p. 118 or †3g, p. 121	3 hour
One of English 3a, 3b, p. 92	3 "
Religious Knowledge 3a or 3b or 3c or 3d or 3e or 3f, p. 160	3 "
*Biochemistry 1, 3, p. 148	7 "
*Household Science 3b, p. 157	12 "
*Hygiene and Sanitation	1 "

FOURTH YEAR

Political Economy 4h, p. 114	3 hour
One of English 4a, 4b, p. 92	3 "
Philosophy 4a, p. 118 or †4h, p. 121	3 "
Religious Knowledge 4a or 4b or 4c or 4d or 4e or 4f, p. 160	3 "
*Food Chemistry 1, 2, p. 149	8 "
*Household Science 4b, 4c, 4d, p. 157	10 "

†*St. Michael's College.*

\**Honours.*

## DEGREE OF BACHELOR OF COMMERCE

## COMMERCE AND FINANCE

The Course in Commerce and Finance (formerly included as an Honour Course in Arts) and the course in Commerce have been amalgamated. The new course, called hereafter Commerce and Finance, leads only to the Degree of Bachelor of Commerce.

The intention of the course is to provide a training for business and commercial life in general and at the same time to prepare applicants for the consular service, trade commissionerships abroad, for the foreign representation of Canadian firms, for employment management, employment service, etc., as well as for the statistical and employment departments of large business houses.

## ENTRANCE REQUIREMENTS

- Pass Matriculation: English, History, Mathematics and three of Greek, Latin, French, German, Italian or Spanish, Experimental Science (Physics and Chemistry) or Agriculture (Parts I and II).
- Honour Matriculation: English, Mathematics (Algebra, Geometry and Trigonometry) and two of Latin, French, German, Italian or Spanish, Physics or Zoology or Botany or Chemistry.

A student who submits a Part I Commercial Specialists' Certificate may substitute the same for Ancient History and a language of Pass Matriculation and for the Geometry and Trigonometry of Honour Matriculation.

## GENERAL REGULATIONS FOR THE COURSE

1. A candidate will not receive credit in a subject unless he obtains at least fifty per cent. of the examination marks as well as fifty per cent. of the aggregate of the term and examination marks in that subject.

2. A candidate will not be granted exemption from lectures and examination in any subject of the First Year, even though he may have Honour Matriculation or equivalent standing in the subject.

3. A candidate will be granted Honour standing who, obtaining at least fifty per cent. in each of the subjects of a year, also obtains an average of seventy-five per cent. of all the marks assigned to the subjects of the year.

4. A candidate for the Examination of any year will be granted Pass standing provided he passes in all, or all but one of the subjects of the year.

5. A candidate who has failed in two subjects at the Annual Examination will be debarred from registration and enrolment until he has obtained standing in at least one of these subjects. (See foot note on page 206).

6. A candidate in any year, who has failed completely at the May examination, will not be allowed to write at the September examination on any

paper or papers set for students in Commerce and Finance; if he wishes to proceed in the course he must repeat the year in which he has failed to secure standing

7. Before entering upon his Fourth Year a candidate must produce evidence satisfactory to the Council of the Faculty of Arts, of having been employed with a commercial firm, in the public service or in some business capacity for at least three months.

By arrangement with the Department of Education graduates in this course who have obtained a Part I Commercial Specialists' Certificate either prior to entering the University or during the course, will be recognized as having secured the academic standing required from candidates for the Commercial Specialists' Certificate.

#### FIRST YEAR

One of English 1a, 1b, pp. 91, 92	2 hours
History 1a, 1b, p. 103	2 "
One of Latin 1a, p. 85	4 "
German 1f, 1g, p. 95	3 "
French 1c, 1d, 1e, p. 98	4 "
Italian 1a or 1c, p. 100	4 "
Spanish 1a or 1d, p. 101	4 "
Geology and Palaeontology 21, p. 155	1 "
*Political Economy 1a, pp. 109, 110	2 "
*Mathematics 1l, p. 127	2 "
*Actuarial Science 1a, 1b, p. 129	2 "

Note—The language chosen in the First Year must be continued throughout the four years, unless a student wishes to pursue advanced studies in Actuarial Science in which case he may drop the chosen language after two years and take Actuarial Science in the Third and Fourth Years.

#### SECOND YEAR

One of English 2a, 2b, p. 92	2 hours
History 2g, p. 105	2 "
Philosophy 2a (i), p. 117 or †2e, p. 120	2 "
‡Mathematics 2g, p. 127	2 "
One of Latin 2a, p. 85	3 "
German 2f, p. 95	3 "
French 2c, 2d, 2e, p. 98	4 "
Italian 2a or 2b, p. 100	3 "
Spanish 2a or 2b, p. 101	3 "
*Political Economy 2a, 2b, 2c, pp. 110, 111	9 "
*Actuarial Science 2a, 2b, p. 130	4 "

\*A candidate who fails to secure 50 per cent. in this subject or group of subjects at the May examination will not be granted standing in his year but must repeat the entire work of the year in a subsequent session.

†This option must be taken by students who wish to take Actuarial Science in the Third and Fourth Years.

‡*St. Michael's College.*

## THIRD YEAR

One of Latin 3a, p. 85	3 hours
German 3f, p. 96	3 "
French 3b, p. 98	2 "
Italian 3d, p. 100	3 "
Spanish 3e or 3f, p. 102	3 "
Actuarial Science 3a, 3d, p. 130	3 "
*Political Economy 3a, 3b, 3c, 3d, pp. 111, 112	12 "
*Actuarial Science 3b, 3c, p. 130	2 "

## FOURTH YEAR

One of Latin 4a, p. 85	3 hours
German 4f, p. 96	3 "
French 4b, p. 98	2 "
Italian 4d, p. 101	3 "
Spanish 4e or 4f, p. 102	3 "
Actuarial Science 4a, p. 130	2 "
*Political Economy 4a, 4g, 4i, pp. 113, 114	7 "
*Two of Political Economy 4b, p. 113; 4c, p. 113; 4f, p. 114	4 "
*Law 4e, p. 116	1 "
*†Actuarial Science 3b, 3c, p. 130	2 "

\*A candidate who fails to secure 50 per cent. in this subject or group of subjects at the May examination will not be granted standing in his year but must repeat the entire work of the year in a subsequent session.

†For students who have not passed this course in the Third Year.

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SUMMER SESSION

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## SUMMER SESSION, 1925

During the Summer Session of 1925 the University of Toronto offers:

(a) The Course leading to the Degree of Bachelor of Arts (The Teachers' Course).

(b) Courses leading to the Degrees of Bachelor of Pedagogy and Doctor of Pedagogy

## GENERAL INFORMATION

Lectures will commence on Thursday, July 2nd, at 10 a.m. Before attending the first lecture students should call at the Extension Office for cards of admission. The time-table will provide for lectures on six days of the week, except that there will be no lectures on Saturday afternoons or on Civic Holiday. The Session closes on Wednesday, August 12th.

Those who are taking the Courses in Pedagogy will enrol at the Ontario College of Education, 371 Bloor St. West. The work of instruction in Pedagogy commences on Monday, July 6th, and closes on Friday, August 7th.

The Extension Office is situated in Simcoe Hall, between Convocation Hall and Knox College.

## REGISTRATION

Application for registration should be made on the form in this Calendar and should, if possible, be forwarded to the Director of University Extension before June 6th. Applications will be accepted up to July 2nd, but subjects not mentioned in this Calendar cannot be arranged for after June 6th.

## RESIDENCES

The University Residences will be open, as usual, for the accommodation of students.

Those who wish to avail themselves of these rooms should make application to Mr. A. T. Laidlaw, Registrar's Office, University of Toronto, early in June. A deposit fee of \$5.00 should accompany the application.

## LIBRARY

Students of the Summer Session will be admitted to the privileges of the University Library.

## EXCURSIONS AND ADDRESSES

Arrangements will be made, if students so desire, to visit a few places of interest under the personal direction of one who is able to give special instruction on the point of interest. Tennis courts will be available for those who wish to use them. Social functions are arranged each year with the co-operation of the Students' Committee.

Evening lectures may be arranged during the session on subjects of general interest.

## THE COURSE LEADING TO THE B.A. DEGREE

## ADMISSION

Applications for admission to the University are to be made on the special forms provided and must be accompanied by all secondary school certificates held by the applicant. Certificates should be sent by registered mail, they are returned as soon as their purpose has been served.

## FEES

Tuition—Each subject, \$15.00.

For admission by certificate to the Second Year . . . . . \$15.00

For admission *ad eundem statum* . . . . . \$10.00

Examinations—\$2.00 each subject. If a student fails on an examination in any subject, a fee of \$5.00 must be paid for each subsequent examination in that subject.

Laboratory—For Practical Work in the laboratory, a deposit fee is required at the beginning of the Session to cover breakages. All, or part, of the fee is returned at the close of the term according to the value of the breakages

## EXAMINATIONS

The Council of the Faculty of Arts will make arrangements whenever possible to allow a candidate who is teaching in Ontario to take his examination in his own locality.

## SUBJECTS OFFERED, 1925

First Year. French.

Second Year History, Psychology, Political Economy, Botany, Astronomy.

Third Year History, French, Psychology, Botany, Astronomy.

Fourth Year History, Psychology, Botany, Astronomy, and any other subject for which a reasonable number of applications is received before June 6th

[NOTE: Astronomy will not be offered unless the number of applications received before May 30th justifies giving this subject.]



## COURSES OF INSTRUCTION

## FIRST YEAR

## FRENCH

Grammar; dictation; translation from English into French, translation at sight from modern French. The following texts are prescribed. ALEXANDRE DUMAS, *Le Comte de Monte-Cristo* (ed. by Tarver), PROSPER MÉRIMÉE, *Quatre contes*, ERCKMANN-CHATRIAN, *Le Juif polonais*; OCTAVE FEUILLET, *Le Village*, ALPHONSE DAUDET, *Lettres de mon moulin*.

## SECOND YEAR

## HISTORY

The Renaissance and the Reformation in Europe with an introductory survey of the Middle Ages

A short introductory course on the later Middle Ages followed by the Renaissance and the Reformation, from the invasion of Italy by Charles VIII to the Treaty of Westphalia, political aspects of the Renaissance in Italy—Milan, Venice, Florence, the Papal States, Naples, the art of the Renaissance, the Reformation in Germany; the Hapsburg dominions and the empire of Charles V; the rise and decline of the Spanish power, centralization and absolutism in France, the Hapsburg-Valois feud, the Counter-Reformation, the revolt of the Spanish Netherlands, the wars of religion in France, Sweden under the Vasa, the Thirty Years' War; France under Henry IV and Louis XIII; the rise and decline of the Turkish power, political theory from Machiavelli to Grotius.

Books: for the introductory course DAVIS, *Mediaeval Europe* and LODGE, *Close of the Middle Ages*, for the period 1494-1648, JOHNSON, *Europe in the 16th Century*; WAKEMAN, *The Ascendancy of France*, LINDSAY, *The Reformation*, BATIFOLL, *The Century of the Renaissance in France*, ARMSTRONG, *Charles V*. For reference, the *Cambridge Modern History*.

British History, 1485-1689. The Tudor system of government, political and diplomatic beginnings of modern English history; the agrarian revolution of the 16th century, the English Reformation; exploration and colonization, relations with France and Spain, the Puritan Revolution, political and religious; the Stuart theory and practice; the Long Parliament and the Civil War; Cromwell and the Commonwealth; the Stuart Restoration; foreign and domestic policies of the last Stuarts; the Revolution of 1689; Ireland under the Tudors and Stuarts; political theories of the period.

Books: *Political History of England*, volume V (Fisher) and volume VI (Pollard); TREVELYAN, *England under the Stuarts*, *Cambridge Modern History*; SEELEY, *Growth of British Policy*; CARLYLE, *Letters and Speeches of Oliver Cromwell* (ed. Firth).

## POLITICAL ECONOMY

General Introduction to the Study of Economics. Elements of Economic Theory, Sketch of Economic History, and of important social changes and movements. TAUSSIG, *The Principles of Economics*. Other books will be prescribed by the lecturer

## THIRD YEAR

## HISTORY

Europe, 1763-1815 Political and social conditions in Europe, and especially in France, before 1789, the French philosophers; the failure of enlightened despotism. The beginning of the Revolution in France, the appeal to force, the reforms of the Constituent Assembly, the outbreak of war, the second revolution, and the fall of the throne; the Convention, the Jacobin government, and the Reign of Terror. The failure of the middle-class reaction 1794-99. The advent of Napoleon, the reorganization of France under the Consulate; the path to Empire and the conquest of Europe, Napoleonic statesmanship in Germany and Italy; the Continental System, the war of Liberation and the fall of Napoleon

Books: LECKY, *England in the Eighteenth Century* (chapters on France), TOCQUEVILLE, *France before the Revolution*, YOUNG, *Travels in France*, SOREL, *L'Europe et la Révolution Française*, vol. i, ACTON, *Lectures on the French Revolution*, MADELIN, *French Revolution*, AULARD, *French Revolution*, BARTHOU and WILLERT, *Mirabeau*, MADELIN, *Danton*; VANDAL, *L'Avènement de Bonaparte*, lives of Napoleon by Fournier, Rose, and Fisher, FISHER, *Bonapartism*, and *Napoleonic Statesmanship in Germany*.

British History, 1689-1815 The relations of England, Scotland and Ireland; the evolution of Cabinet government and of the Whig and Tory parties, with special reference to the work of Walpole, Chatham and the younger Pitt therein, British foreign and colonial policy, the long struggle with France, especially in the field of colonial enterprise; the loss of the American Colonies, society before and during the Industrial Revolution, the Methodist movement, the effects of the French Revolution on English life and thought.

Books: for outlines, MUIR, *Short History of the British Commonwealth*, FLETCHER, *Introductory History of England*, vol. iii, TREVELYAN, *England under the Stuarts*, ROBERTSON, *England under the Hanoverians*, MACAULAY, *History of England and Essays*; LECKY, *England in the Eighteenth Century*, MORLEY, *Walpole and Burke*, WILLIAMS, *Chatham*, HOLLAND ROSE and ROSEBERRY, *Pitt*, TREVELYAN, *Early Life of C. J. Fox*.

## FRENCH

(1) Standards of the classical age and the main ideas of the eighteenth century, studied in French literature from Malherbe to the *philosophes*. ABBY, AUDIC ET CROUZET *Histoire illustrée de la littérature française*;

*French Prose of the XVIIth Century* (ed. Warren), CORNEILLE, *Le Cid*; MOLIÈRE, *Le Misanthrope*, RACINE, *Andromaque*; LA FONTAINE, *Fables*; VOLTAIRE's *Prose* (ed. Cohn and Woodward)

(2) Supplementary reading from the authors of the period, carried on under the direct supervision of the instructors, forms an essential part of this course.

(3) Composition, translation at sight from modern French.

#### FOURTH YEAR

##### HISTORY

The History of Europe, 1815-1914 a study of the national movements of the 19th century and their effect upon international relations. Special attention will be paid to: the settlement of Vienna and the Congress period, the revolutions of 1848; the age of Napoleon III and the foundation of the Third French Republic; the work of Cavour in Italy and of Bismarck in Germany, the growth of German imperialism and the resultant diplomatic upheaval, the modern history of the Near Eastern and Balkan problems, and the condition of European civilization on the eve of the Great War

Books for outlines, A PHILLIPS, *Modern Europe*, LIPSON, *Europe in the Nineteenth Century*, SEIGNOBOS, *Political History of Contemporary Europe*, and FYFFE, *History of Modern Europe*, vols. ii and iii, continued by GOOCH, *Modern Europe, 1878-1919*, are on a larger scale, *Cambridge Modern History*, vols. X-XII; MOWAT, *History of European Diplomacy*, for France, BOURGEOIS, *Modern France*, for Italy, BOLTON KING, *History of Italian Unity*, and STILLMAN, *Union of Italy*, for Germany, ROBERTSON, *Bismarck*, and DAWSON, *German Empire*. An historical atlas is essential for the study of the period.

The History of Great Britain, 1815-1914 The Industrial Revolution and the social history of industrialized England, reform in central and local government; the Benthamite philosophy; Free Trade; the Manchester School; Liberalism, the working class movements, *e.g.*, Chartism and the later Socialism; Trade Unionism; the advent of democracy and its influence on policy and institutions, the history of political parties, the development of British "Imperial" opinion, the Irish question, domestic politics under Gladstone, Disraeli, Salisbury; foreign policy from Castlereagh to Sir Edward Grey.

Books: TREVELYAN, *British History in the Nineteenth Century*, MUIR, *Short History of the British Commonwealth*, vol. ii; EGERTON, *History of British Foreign Policy*, *Cambridge History of British Foreign Policy*; DICEY, *Law and Opinion in England*. Biographies. PHILLIPS, *Canning*, WALLAS, *Francis Place*; TREVELYAN, *Grey of the Reform Bill*, and Bright, MONYPENNY and BUCKLE, *Disraeli*; MORLEY, *Gladstone*; CREIL, *Salisbury*; STRACHEY, *Queen Victoria*.

The Institutions of the modern British Empire a comparative study The governments of Great Britain, Canada and the other Dominions, India and the Crown Colonies; the chief problems of the British Commonwealth; a comparison with methods of government in other countries. Books: LOWELL, *Government of England*, KEITH, *Dominion Home Rule*, and *Responsible Government in the Dominions*; FIGGIS, *The Irish Free State Constitution*; HORNE, *Political System of British India*.

#### FOR SECOND, THIRD, OR FOURTH YEAR

##### PSYCHOLOGY

An introductory course in general Psychology, with applications to problems of education. Lectures and demonstrations.

##### BOTANY

A course in Botany, with the emphasis on the Natural History of Plants, including the knowledge of the various types of vegetable life, and the classification, oecology and uses of both native and introduced forms. Some attention will also be given to the origin of our cultivated plants.

##### ASTRONOMY

Introduction to Astronomy. An elementary course in which the various astronomical phenomena are discussed, including systems of co-ordinates, the constellations, the solar system, the nebulae, star clusters, evolution of the stars. Text-book: YOUNG, *Elements of Astronomy*.

#### THE TEACHERS' COURSE

The Pass Course, according to the following scheme, is the basis of instruction

First Year. English, Latin, Mathematics (Algebra and Geometry), French, History or Trigonometry, Science (one of Botany, Zoology, Chemistry, Physics), or one of Greek, German, Italian, Spanish.

The Teachers' Course provided by the University begins ordinarily in the Second Year and the candidates hitherto admitted have held for the most part Faculty Entrance, Upper School, Senior Leaving, or Honour Matriculation certificates.

Second Year: English or Mathematics I, French, Science, History, Psychology or Political Economy.

Third Year: English, French or Mathematics I, Science, History, Ethics or Political Economy.

Fourth Year: English, French or Mathematics I, Science, History, History of Philosophy or Political Economy

The Science of the Second, Third, and Fourth Years may be selected from Botany, Zoology, Geology, Physics, Chemistry, and Astronomy, one for each year. These sciences are so arranged as to provide exactly the same university credit and may be taken in any order. Only one science may be taken in one year. They will be offered in Summer Sessions and Teachers' Classes as follows

Summer Session, 1925. Botany or Astronomy.

1926-26: Geology or Physics

1926-27. Zoology or Chemistry.

1927-28. Botany or Astronomy.

A student who selects Mathematics, or Political Economy, or the philosophical group of subjects, must take the subject or group chosen throughout the three years, *i.e.*, the sequence provided in these subjects cannot be broken.

#### REGULATIONS GOVERNING THE TEACHERS' COURSE

1. This course is open to persons actually engaged in teaching and to such others as have been approved by the Council. In all cases application for admission must be made to the Registrar of the University through the Director of University Extension. Only under exceptional circumstances will a candidate be allowed to attend classes in more than three subjects during one session of the Teachers' Course.

2. A student proceeding to the degree shall on or before *October 1st* of each year submit a statement of the work which he proposes to take (a) in the Teachers' Classes or (b) under supervision preparatory to the Summer Session, and on or before *May 15th* of each year, a similar statement of the work he desires to take during the Summer Session.

3. A student will receive credit for each subject in which he secures fifty per cent.

4. A student will not receive credit for a subject of a higher year until he has passed the examination of the lower year in the same subject. He may, however, be a candidate for examination in the work of two successive years in the same subject.

5. A student who has not been granted complete First Year standing may not enter upon the work of the Third Year, nor a student who has not been granted complete Second Year standing, upon the work of the Fourth Year.

6. Pursuant to Section 124 of the Revised Statutes of Ontario, 1913, in the case of a candidate for the degree of Bachelor of Arts, registered in the Teachers' Course, enrolment in one of the Arts Colleges shall not be necessary.

7. Instruction during the regular session will be given as far as possible to meet the convenience of the members of the classes residing in Toronto

and its immediate vicinity. Instruction during the regular session is also provided, as far as possible, in other centres in the Province where a sufficient number of teachers, or others employed during the day, may be enrolled.

8. The Summer Session is held during July and a part of August, and is open (a) to persons engaged in teaching, (b) to such others as have been approved by the Council of the Faculty of Arts, and (c) to regular students who have failed to receive credit in one or at most two subjects of the Pass Course, provided always that instruction in such subjects has been arranged for at that Summer Session.

9. The work of the Second, Third, and Fourth Years of the Teachers' Course may be covered in five years and will involve (a) attendance on Teachers' Classes during four regular sessions or (b) attendance for four Summer Sessions and supervision during four regular sessions.

10. Instead of completing his course under this plan a candidate proceeding to the degree is advised to attend the regular courses of instruction in the Fourth Year, in which case the fourth Summer Session is not compulsory. Students are advised to acquaint themselves with the regulations of the Department of Education respecting High School Assistants' certificates

11. A candidate will not be allowed to present himself for examination in any subject until he has attended one Summer Session and has had supervision of his work during one academic year, or until he has attended Teachers' Classes in that subject during one regular session or until he has completed the necessary minimum of attendance. See Section 9.

12. Supervision of work should precede the Summer Session but, as such supervision may follow class instruction, assistance in the work of either group of the Second Year or of the Third Year will be provided.

## COURSES FOR DEGREES IN PEDAGOGY

The Ontario College of Education offers courses of instruction for the degrees in Pedagogy during the regular College Sessions and during Summer Sessions.

### DEGREE OF BACHELOR OF PEDAGOGY (B.PAED)

The degree of Bachelor of Pedagogy (B.Paed.) will be awarded under the following conditions:

1. The candidate shall hold an approved degree in Arts, Science, Agriculture, Engineering, or Commerce.

2. The candidate shall be in attendance at the Ontario College of Education during two regular College Sessions or three Summer Sessions. A High School Assistant's, or First Class, or Second Class certificate valid in Ontario or a regular course in an approved training school for teachers will be accepted in lieu of attendance during one of these regular Sessions or one of the Summer Sessions

3. The course shall consist of three subjects to be taken in any order and to be selected from the following:

Group A.—Science of Education, Educational Psychology.

Group B.—History of Education, Educational Administration

Not more than two of these subjects shall be taken during a regular Session and not more than one during a Summer Session.

Candidates who, under Section 2 above, are exempted from attendance during one regular Session or one Summer Session will be exempted also from the instruction and examination in one of the three subjects, provided that the degree be awarded only to candidates who have taken the instruction and examinations in at least one subject in each of the two groups of subjects.

4. The examinations shall be held in May at the University of Toronto or in any other locality in the Province chosen by the candidate and approved by the Senate and under a presiding examiner appointed by the Senate, provided the candidate thereat defray the cost of the local examinations. The candidate shall send notice not later than the 15th day of March of his intention to take the examinations and of the locality he has chosen for such examinations.

5. The fee for registration is \$5. The fee for the Summer Session is \$10, the fee for the regular Session, which shall include the examination and library fees, is \$25. The fee for examination is \$3 for each subject. The fee for the degree is \$20. All fees shall be paid to the Bursar with the application for registration or examination, as the case may be.

6. The standard for a Pass degree shall be 60 per cent. of the marks assigned to each subject. The candidate who obtains 60 per cent. of the marks of each subject, and 66 per cent. of the aggregate of marks, shall be awarded a degree with Second Class Honours. The candidate who obtains 60 per cent. of the marks of each subject and 75 per cent. of the aggregate of marks shall be awarded a degree with First Class Honours. On the report of the instructors concerned, a maximum of 40 per cent. of the marks in any subject may be assigned to the term work of the candidate.

7. Subjects of Instruction and Examination.

(a) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

(b) Educational Psychology (Two papers.)

(c) The History of Education in Western Europe and North America in modern times, with special reference to Ontario, Great Britain, and the United States. (Two papers.)

(d) Educational Administration in Great Britain, the United States, France, and Germany, with special reference to the administration and organization of education in Ontario. (Two papers.)

## DEGREE OF DOCTOR OF PEDAGOGY (D.PAED.)

The degree of Doctor of Pedagogy (D.Paed.) will be awarded by the School of Graduate Studies under the following conditions:

1. The candidate shall hold an approved degree in Arts or Science or in the applied sciences of Agriculture, Engineering, or Commerce.
2. The candidate shall be in attendance at the Ontario College of Education during three regular College Sessions or four Summer Sessions, A High School Assistant's, First Class, or Second Class certificate valid in Ontario, or a regular Course in an approved training school for teachers will be accepted in lieu of the attendance during one of these regular Sessions or one of the Summer Sessions.
3. The Course shall consist of the four subjects and a thesis as defined in Sections 5 and 7. The subjects may be taken in any order, provided that not more than two be taken in any regular Session and not more than one in any Summer Session. Candidates who, under Section 2, are exempted from attendance during one regular Session or one Summer Session will be exempted also from the instruction and examination in one of the four subjects.
4. The examinations shall be held at such times and under such conditions as to date of application, place of examination, percentages, etc., as obtain with the Bachelor's degree.
5. The candidate, after passing the prescribed examinations, shall also submit on or before March 1st a thesis on some educational topic selected with the approval of the Ontario College of Education. In valuing this thesis literary excellence, as well as the discussion of the subject, will be taken into account. After the examiners have reported in favour of the candidate's examinations and thesis, and before the degree of D.Paed. is conferred, the candidate shall furnish the Secretary of the School of Graduate Studies with twenty-five copies of the thesis.
6. The fee for registration, if not already registered in the B.Paed. Courses, is \$5. The fee for the Summer Session is \$10; that for the regular Session, which shall include the examination and library fees, \$25. The fee for examination is \$3 for each subject. The fee for the degree is \$25. All fees shall be paid to the Bursar with the application.
7. Subjects of Instruction and Examination:
  - (a) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)
  - (b) Educational Psychology. (Two papers.)
  - (c) The History of Education in Western Europe and North America in modern times, with special reference to Ontario, Great Britain, and the United States. (Two papers.)
  - (d) Educational Administration in Great Britain, the United States, France, and Germany, with special reference to the administration and organization of education in Ontario. (Two papers.)







UNIVERSITY COLLEGE

## UNIVERSITY COLLEGE

University College is, since the Federation Act of 1887, the complement, in the system of higher education provided by the State, of the University of Toronto. The State furnishes through University College instruction in those departments of the Arts course in which it does not furnish instruction through the University. The departments are Greek, Latin, Ancient History, English, French, German, Oriental Languages, and Ethics.

<i>Principal</i> .....	MAURICE HUTTON, M.A., LL.D.
<i>Registrar</i> ...	G. OSWALD SMITH, M.A.
<i>Dean of Women and Head of the Women's Union</i> .....	MRS. M. M. KIRKWOOD, PH D.
<i>Dean in Residence</i> ....	C. N. COCHRANE, M.A.

### UNIVERSITY COLLEGE COUNCIL

#### THE PRINCIPAL.

PROFESSORS ALEXANDER, CAMERON, MACNAUGHTON, MEEK, MILNER, NEEDLER, TAYLOR, TRACY, WALLACE, WILL.  
ASSOCIATE PROFESSORS COCHRANE, DALE, DAVIS, DE CHAMP, FAIRLEY, HAMILTON, JEANNERET, KNOX, MORAUD, OWEN, SMITH.  
ASSISTANT PROFESSORS ALLEN, BROWN, CLAWSON, DUFF, HEDMAN, IRWIN, MCKELLAR.

### ENROLMENT OF STUDENTS

The conditions precedent to enrolment in University College are determined by the Council of the College. Every student of the College must either be an undergraduate of the University, or, if he be an occasional student, must satisfy the College Council that he has a sufficient knowledge of the subjects in which he proposes to attend College lectures to do so with advantage.

### DISCIPLINE

The College has full control of its students so far as concerns their attendance upon lectures in the courses provided by the College, and their admission to the University examinations. No student of the College will be received by the University for examination without a certificate from the College that he has complied with its regulations.

### RELIGIOUS KNOWLEDGE

No student will be allowed to take a Religious Knowledge option in any other than University College without the consent of the College Council. Each student who wishes to take a course in Religious Knowledge outside University College must make formal application to the Principal on or before October 25th, stating what course he desires to take,

for what subject the course is an option, in which College the applicant proposes to take this course and for what reason he wishes to take it outside University College.

#### LODGING AND BOARD

Lodging and board are obtainable in private boarding houses within convenient distance of the University, or rooms may be rented and board obtained separately. A list of accredited boarding-houses is kept by the Secretary of the University Student Christian Association in Hart House, and by the Head of the University College Women's Union. Students are recommended to consult them with reference to the selection of suitable accommodation. Board may also be obtained at moderate rates at Hart House, and for Women at the Women's Union.

For University and College Residences see pages 154 155, 156.

#### STUDENT SOCIETIES, ETC.

Various societies and associations have been organized in the College for the promotion of Christian effort, social intercourse, literary and scientific activity, and athletics.

The College has a branch of the University Student Christian Association, which has its quarters in Hart House.

The women students also have a College branch of the Student Christian Association.

The University College Literary and Athletic Society is the authorized administrative body of the men students of the College, for which a compulsory fee of \$2.00 a year is collected from each member. This Society officially represents the men students in dealing with the University and College governing bodies. It directs the social and athletic activities of the men students. It also holds debates and literary programmes.

The Women Undergraduates' Association holds a similar position in relation to the women students, a compulsory fee of \$1.00 a year being collected from each member.

A joint Council representing these two bodies deals with matters of common interest to all the students.

The men of each Year have their own elected executive. The Presidents of the four Years are *ex officio* Councillors on the executive of the Literary and Athletic Society.

The women students have similar Year executives.

There is also a Women's Literary Society of the College.

The Players' Guild is an organization devoted to the study of the drama and is open to all students of the College.

Besides the above there are several associations connected with the College departments, such as the Classical Association, the Modern Language Club, etc. There are similar societies connected with the University departments, to which members of the College are eligible.

## REGULATIONS RELATING TO STUDENTS, TERMS AND EXAMINATIONS

1. Students entering University College are required to produce satisfactory certificates of moral character and previous good conduct.

2. No student will be enrolled in any year, or be allowed to continue in attendance, whose presence for any cause is deemed by the Council to be prejudicial to the interests of the College.

3. Students are required to attend the courses of instruction and examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the College who persistently neglects academic work.

4. The certificate required for admission to the University examinations will not be granted to students who have been reported to the Council for not conforming to the College regulations, or for improper conduct of any kind.

5. Men and women students, unless members of the same family, are not permitted to reside in the same lodging-houses.

6. All women undergraduates in University College are required to register with the Head of the Union at the beginning of term. Her directions as to conduct are to be observed. Women undergraduates who are away from home and not in a College Residence must have their boarding-houses approved by her.

7. All interference on the part of any student with the personal liberty of another, by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Council. Any student convicted of participation in such proceedings will forfeit the certificate required for admission to the University examinations, and will render himself liable to expulsion from the College.

8. A student who is under suspension, or who has been expelled from the College or University, will not be admitted to the University buildings or grounds.

9. The constitution of every College society or association of students and all amendments to any such constitution, must be submitted for approval to the College Council. All programmes of such societies or associations must, before publication, receive the sanction of the Council. Permission to invite any person not a member of the Faculty of University College to preside at or address a meeting of any society or association is subject to the consent of the Council. Societies and associations are required to confine themselves to the objects laid down in their constitution. Each Society composed wholly or in part of students registered in University College shall supply the Principal with a copy of its constitution, and the names and addresses of its officers.

10. The name of the College is not to be used in connection with a publication of any kind without the permission of the College Council.

11. Certificates of attendance on lectures in any department during an

academic year may be given to occasional students who have been regular in their attendance, and who have also passed the examinations in such department.

12. (a) The Council of University College will sanction dancing only in buildings the use of which it has authorized.

(b) In every instance where dancing forms any part of the programme a complete list of the participants who are not University students, with their addresses, shall be supplied by the President of the Society.

(c) For each evening meeting attended by both men and women students chaperones must be appointed, the names and addresses of whom shall be submitted one week in advance to Mrs. Kirkwood, 79 St. George Street.

(d) Dancing shall cease by 11 o'clock p.m., unless special permission has been obtained for its continuance beyond that hour

(e) When dancing forms part of a regular meeting of a Society, it shall be limited to the final half-hour.

(f) Applications for permission to hold social gatherings are to be addressed in writing to the Convener of Committee on Social Activities, University College.

#### AWARDED BY THE COUNCIL OF UNIVERSITY COLLEGE, JUNE, 1924

##### PRIZES

The Squair French Prose Prize . . .	Miss J. E. Lyall
The Toronto Alumnae Prize in English Composition of the Second Year . . .	E. K. Brown
The Tracy Prize, for Ethics, Fourth Year	No award

##### MEDALS

The Governor-General's Silver Medal for Modern Languages	P. Matenko
McCaul Gold Medal in Classics . . .	No award

##### SCHOLARSHIPS

The McCaul, for Classics (Junior Matriculation).	M. St. A. Woodside
The Moss, for Classics (First Year) . . .	Miss H. I. MacTaggart
The Edward Blake, for Moderns (First Year) {	Miss E. B. Abbott } (aeq.)
	Miss H. M. Wickware }
The George Brown, for Moderns (Second Year)	E. K. Brown
The Wm. Mulock, for Classics (Second Year)	Miss D. Wright
The Moss, for Classics (Third Year)	F. W. Beare
The Julius Rossin, for Moderns (Third Year) . . .	Miss M. J. MacEwan
The John Macdonald, for Philosophy (Third Year)	F. H. Page





VICTORIA COLLEGE



## VICTORIA COLLEGE

Victoria College was founded by resolution of the Conference of the Methodist Church in Canada, held in Kingston in August, 1830. The institution was opened for students at Cobourg on the 18th of June, 1836, with the Rev Matthew Richey, M.A., as Principal. On the 12th of October, 1836, letters patent were issued by His Majesty King William IV, incorporating the institution as a seminary of learning for the Province of Upper Canada, under the name of "Upper Canada Academy".

In 1841 the Parliament of the United Provinces of Upper and Lower Canada, being now first constituted by Acts of the Imperial Parliament with power to grant such a charter, at its first session held in the city of Kingston, passed an Act extending the charter of the Academy under the name and style of "Victoria College, with power and authority to confer degrees of Bachelor, Master and Doctor of the various Arts and Faculties", which Act was assented to by the Governor-General on the 27th of August, 1841.

On the 21st of October, 1841, the Rev. Egerton Ryerson, having been appointed principal, opened the first college session under the enlarged charter.

In the year 1844 the Rev. A. McNabb, D.D., succeeded the Rev. Dr. Ryerson as Principal, and occupied the office until 1849. At the close of his term the number of students in the College was 140.

In 1850 the Rev. S. S. Nelles, M.A., was appointed Principal, and addressed himself to the task of organizing and enlarging the College to the status and work of a University. In the year 1854-55 the Faculty of Medicine was added and established in Toronto. In 1860 the Faculty of Law was added, and in 1871 the Faculty of Theology.

In the year 1883-84 a Commission, appointed by the General Conference of the Methodist Church, arranged for the consolidation of Albert College, Belleville, with Victoria College, Cobourg, and legal effect was given to this consolidation by Act of the Legislature of Ontario, 47 Vict., chap. 93.

The corporate name was by this Act changed to "Victoria University". The government of the University was vested in a Board of Regents, Chancellor, Vice-Chancellor and Senate. To these bodies was given power to affiliate outlying colleges, and full university powers in all faculties were continued. The Rev S. S. Nelles, D.D., LL.D., as President, was *ex officio* first Chancellor, and William Kerr, M.A., LL.D., K.C., Senator, was elected first Vice-Chancellor.

Under the provisions of the present charter the following colleges are affiliated in Arts with Victoria University:—Albert College, Belleville; the Ontario Ladies' College, Whitby, Alma College, St. Thomas.

In 1887, the Rev. S. S. Nelles, D.D., LL.D., died, and the Rev. N. Burwash, S.T.D., LL.D., was appointed President and Chancellor.

On the 12th of November, 1890, under the provisions of the Revised Statutes of Ontario, chap. 230, and the Acts amending the same, Victoria University was, by proclamation of the Lieutenant-Governor, federated with the University of Toronto.

On the first of October, 1892, the Faculty of Victoria College began work in the present Main Building in Queen's Park, Toronto, and the federation of the Universities was practically consummated. The Faculty of Arts then assumed the work and relation of a College in the University of Toronto, providing instruction in all subjects assigned by the Federation Act to University College. In other subjects the students of Victoria College attend the lectures and laboratory practice of the University of Toronto, and receive their degrees under the statutory regulations of its Senate.

By the provisions of the Federation Act of 1887 the President of Victoria College, a representative of the Senate of Victoria College, and five representatives of the graduates in Arts, are members of the Senate of the University of Toronto, and the graduates and undergraduates of Victoria College are granted the same standing and privileges in the University of Toronto. By the provisions of the University Act of 1906, three members of the Arts Faculty of Victoria, chosen by that body, are sent as additional representatives to the Senate of the University of Toronto, and all the permanent members of the Arts Staff of Victoria as well as one member of the theological staff chosen by that Faculty are members of the Council of the Faculty of Arts of the University of Toronto.

At Federation five hundred and seventy-seven graduates of Victoria College were admitted to standing and privileges of the degree of B.A. in the University of Toronto; two hundred and thirty-one to those of M.A.; nine hundred and sixty-three to those of M.D.; one hundred and twenty-five to those of LL.B., and forty to those of LL.D.

By the University Act of 1901 the electoral body in Convocation of Victoria College was made permanent, and was enlarged to include all graduates in Arts of the University of Toronto since 1892 who at graduation were enrolled in Victoria College.

The electoral body of Victoria College in the Convocation of the University of Toronto now consists of about 2435 graduates in Arts, besides the graduates in Law and Medicine, who form one body with those of the University of Toronto.

In 1913, the Rev. N. Burwash, S.T.D., LL.D., retired from the position of President and Chancellor and the Rev. R. P. Bowles, M.A., D.D., LL.D., was appointed in his stead.

The following Benefactions have been given to Victoria University for the endowment of chairs and erection of buildings:—

Mr and Mrs Edward Jackson for endowment of chair, \$30,000.

Wm. Gooderham, Esq., for building and endowment, \$200,000.

The Honourable Geo. A. Cox and Mrs Cox, for endowment of two chairs, \$100,000

Hart A. Massey, Esq., for building and endowments, \$960,000.

The Honourable John Macdonald, for building for federation purposes, \$25,000.

W. E. H. Massey, Esq., for endowment, three hundred shares of Massey-Harris Stock.

Sir Joseph Flavelle, Bart, LL.D., for endowment, \$30,000.

Andrew Carnegie, Esq., for library building, \$50,000

Cyrus A. Birge, Esq., for library endowment, \$50,000.

From these and other sources the following Chairs have been endowed:—

The Edward Jackson Chair in Biblical and Systematic Theology.

The Ryerson Chair in Ethics and Evidences of Christianity.

The Nelles Chair in Ancient History.

The William Gooderham Chair in English Literature.

The Eliza Gooderham Chair in French Literature.

The H. A. Massey Chair in the English Bible.

The Eliza Phelps Massey Chair in Old Testament Exegesis.

The Geo. A. Cox Chair in New Testament Exegesis.

The Margaret Cox Chair in Homiletics and Pastoral Theology.

The W. E. H. Massey Chair in Greek Language and Philosophy.

The J. W. Flavelle Chair in Hebrew.

A special endowment for the Presidency of the College.

The John Macdonald Chair in Latin.

The buildings, library, furniture and grounds of Victoria College are now valued at \$1,184,304.39, and the endowment and prize fund totals \$1,297,318.25.

GOVERNMENT OF VICTORIA COLLEGE

BOARD OF REGENTS

*Representatives of the General Conference:*

REV. S. D. CROWN, D.D., LL.D.  
 REV. J. W. GRAHAM, B.A., D.D., LL.D.  
 REV. W. L. HILES, B.A.  
 REV. A. J. IRWIN, B.A., B.D., D.D.  
 REV. W. J. SMITH, B.A.  
 REV. TREVOR H. DAVIES, D.D.  
 REV. R. N. BURNS, B.A., D.D.  
 REV. W. G. CLARKE, B.A.  
 A. E. AMES, ESQ.  
 C. D. MASSEY, ESQ., LL.D.  
 H. H. FUDGER, ESQ.  
 HON. N. W. ROWELL, LL.D., K.C.

*Representatives of the Alumni:*

HON. J. J. MACLAREN, M.A., LL.D., D.C.L., *Vice-Chancellor*.  
 MRS. G. J. BLEWETT, B.A.  
 G. H. LOCKE, M.A.  
 REV. C. W. BISHOP, B.A.  
 F. N. G. STARR, C.B.E., M.D., C.M., F.A.C.S.  
 PROFESSOR C. T. CURRELLY, M.A.  
 MRS. R. G. DINGMAN, B.A.  
 J. R. L. STARR, B.A., LL.B., K.C.

*Co-opted by General Conference and Alumni Representatives:*

REV. R. P. BOWLES, M.A., D.D., LL.D., *Chancellor*.  
 W. E. RUNDLE, ESQ.  
 E. R. WOOD, ESQ.  
 G. H. WOOD, ESQ.  
 F. H. DEACON, ESQ.  
 A. R. FORD, B.A.  
 LADY FLAVELLE  
 H. C. COX, ESQ.

## THE SENATE

REV. R. P. BOWLES, M.A., D.D., LL.D., *Chancellor.*

HON. MR. JUSTICE MACLAREN, M.A., LL.D., *Vice-Chancellor.*

REV. S. D. CHOWN, D.D., *General Superintendent of the Methodist Church*

A. P. COLEMAN, M.A., Ph.D. (Bresl.) LL.D., F.R.S., *Honorary Professor.*

PROFESSORS OF THE FACULTY OF ARTS.

PROFESSORS OF THE FACULTY OF THEOLOGY.

MEMBERS OF THE BOARD OF REGENTS.

*Representative of Albert College:*

F. W. MERCHANT, B.A., D.P.A.D.

*Representative of the Ontario Ladies' College.*

REV. F. S. FAREWELL, B.A.

*Representative of Alma College*

REV. P. S. DOBSON, M.A.

*Representatives of the Alumni*

REV. W. B. CREIGHTON, B.A., D.D.

H. W. GUNDY, B.A.

REV. J. H. ARNUP, B.A.

H. W. AIKINS, B.A., M.D.

MRS. G. H. DUFF, B.A.

MISS E. F. ADAMS, B.A.

F. H. CLARKE, B.A.

F. C. COLBECK, B.A.

## ADMINISTRATIVE OFFICIALS

*President*.....REV. R. P. BOWLES, M.A., D.D., LL.D.

*Dean of the Faculty of Arts* . . . . . N. W. DEWITT, B.A., Ph.D.

*Dean of the Faculty of Theology* . . . . . REV. J. F. McLAUGHLIN, B.A.

*Registrar* . . . . . C. E. AUGER, B.A.

*Librarian* . . . . . REV. F. LOUIS BARBER, M.A., Ph.D.

*Bursar* . . . . . REV. F. LOUIS BARBER, M.A., Ph.D.

*Accountant* . . . . . W. J. LITTLE, B.A.

*Secretary of the Faculty*... . . N. W. DEWITT, B.A., Ph.D.

*Secretary of the Faculty of Theology* . . . . . REV. W. A. POTTER, M.A., B.D.

*Honorary Dean of Residence* . . . . . C. V. MASSEY, M.A.

*Dean of Women Students* . . . . . MISS M. E. T. ADDISON, B.A.

*Treasurer* . . . . . W. E. RUNDLE, Esq.

GENERAL REGULATIONS AND ANNOUNCEMENTS  
FOR STUDENTS IN ARTS

## ADMISSION

Students are admitted to registration in the Faculty of Arts on having passed the Matriculation examination prescribed by the University of Toronto, or on giving the Faculty satisfactory evidence of their ability to pursue the course of study proposed. They are required to observe the general regulations of the University of Toronto and of Victoria College in regard to attendance on lectures and examinations.

## EXAMINATIONS

No student may present himself for any University examination subsequent to matriculation without having complied with all the requirements of his college affecting his admission to such examination.

## OCCASIONAL STUDENTS

Occasional students may be admitted to lectures on application.

Certificates of attendance on lectures in any department during an academic year may be given to occasional students who have been regular in their attendance and who have passed the examinations in such department.

## TERMS

The term will not be allowed to students who have been reported to the President by any Professor as neglecting to attend the required lectures, or who have not conformed to the statutes and regulations of the College.

## INSTRUCTION

Instruction in the various subjects of the Arts course is given by the Arts Faculty of the University of Toronto and the Arts Faculty of Victoria College. Instruction in the Religious Knowledge options is given by the Theological Faculty of Victoria College.

## COLLEGE EXAMINATIONS

Students are required to attend all examinations prescribed by the Professors and Lecturers in their departments.

Prizes and honours are awarded on the recommendation of the Professors and Lecturers, in accordance with the requirements prescribed by them in their several departments.

## FEES

The fees required to be paid by students enrolled in Victoria College are those prescribed by the Governors of the University of Toronto. Enrolment fees are paid to the Fees Clerk of the College; all other fees are paid to the Bursar of the University of Toronto.

## DISCIPLINE

All students enrolled in Victoria College are subject to the regulations as to discipline prescribed by the Council of the Faculty of Arts of the University of Toronto.

Students are required to attend the lectures, as well as the examinations on all subjects necessary for students of their course and standing. Compliance with this rule will be required as a condition of admission to examination by the University unless dispensation has been obtained.

All interference with the personal liberty of the student, by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence is forbidden by the Faculty. Any student convicted of participation in such proceedings will forfeit the certificate required for admission to the University examinations, and will render himself liable to expulsion from the College.

## RELIGIOUS SERVICES

Morning prayers are held daily except Saturday and Sunday in the Chapel, at which all students are expected to be present. Other religious services will be held at suitable times, to which all students are cordially invited.

## LIBRARIES, MUSEUMS, ETC.

The students of Victoria College, besides having the use of the University of Toronto Library and the various Laboratories of the University, have free access to the Victoria University Library, which consists of a working collection of 30,000 bound volumes on the English, Latin, Greek, French and German languages and literatures, History, Philosophy and the various departments of Theology.

The College has loaned to the Royal Ontario Museum its mineralogical, palaeontological and biological collections, as well as its collection of Egyptian and Indian relics.

## STUDENTS NOT IN RESIDENCE

All students who do not reside in any one of the Residences or who do not reside with their parents or with such persons as their parents or guardians direct, are recommended to board and lodge in such houses as are approved by the President of the College. A carefully selected list of boarding-houses, where board and rooms may be obtained, is prepared each year by the Student Christian Association. Students will be expected to observe proper hours and to maintain the conduct of Christian ladies and gentlemen.

## THE RESIDENCE FOR MEN STUDENTS

The Residence buildings comprise one hundred and sixteen bed-sitting rooms, and in each house there is a Common-Room with a fire-place on the ground floor, as well as a bedroom and sitting-room for the Tutor in Residence. About fifteen bedrooms have fire-places, and in one house there are two suites, each consisting of a bedroom and a study.

The Hall, known as Burwash Hall, is capable of seating 200 persons at meals. Used as a hall for lectures, it will seat about 700.

All inquiries should be addressed to the Accountant, Victoria College, Toronto, from whom can be obtained further information.

## THE RESIDENCES FOR WOMEN STUDENTS

The Residences for Women Students, Annesley Hall and other houses, furnish residence for one hundred and eleven women students of Victoria College.

Applications for rooms must be accompanied by a deposit fee of \$10, which will be refunded if the application is withdrawn before September first. Fees are payable half on the first of October and half on the first of February.

Further information may be obtained by writing to the Dean of Women Students, Annesley Hall, Queen's Park, Toronto.



## MEDALS, SCHOLARSHIPS, AND PRIZES, 1924

## FACULTY OF ARTS

Awarded by the Senate of The University of Toronto (those marked with an asterisk) and by the Senate of Victoria College

## FOURTH YEAR

*The Rhodes Scholarship	N. J. Endicott
*The Marion Dickenson Scholarship in Household Science	Miss M. B. R. Fawcett
*The Governor-General's Gold Medal (Miss I. F. Irwin, <i>proxime accessit</i> )	F. J. G. Cunningham
*The Quebec Entente Prize	Miss G. H. McKay
The Prince of Wales Gold Medal in the Pass Course	Miss F. M. Spence
The Prince of Wales Silver Medal in the Pass Course	F. S. Rivers
The Governor-General's Silver Medal	F. J. G. Cunningham (mention) Awarded to Miss I. F. Irwin
The Edward Wilson Gold Medal in Classics	H. N. Couch
The S. H. Janes Silver Medal in Classics	Miss I. F. Irwin
The J. J. MacLaren Gold Medal in Moderns	Miss G. H. McKay
The Regents' Gold Medal in English and History	N. J. Endicott
The J. Reginald Adams Gold Medal in Political Science	F. J. G. Cunningham
The E. J. Sanford Gold Medal in Philosophy	{ R. E. Gosse } { H. Moores } (aeq.)
The Regents' Gold Medal in Philosophy, English and History	Miss R. J. Stewart
The S. H. Janes Silver Medal in Philosophy, English and History	Miss J. A. B. Maitland
The Regents' Gold Medal in Mathematics and Physics	Miss M. E. Depew
The S. H. Janes Silver Medal in Mathematics and Physics	E. H. Graham
The G. A. Cox Gold Medal in Natural Science	Miss V. I. Jones
The Regents' Gold Medal in Household Economics	Miss M. B. R. Fawcett
The Reginald Heber Jolliffe Gold Medal in English	N. J. Endicott (mention) Mrs R. J. Stewart (mention) Miss S. M. Davidson
The W. J. Robertson Prize in Canadian Constitutional History	F. J. G. Cunningham

THIRD YEAR

The George Dennis Morse Scholarship in English and History	D. G. Creighton
The George John Blewett Scholarship in Philosophy	C. G. Park
The Hamilton Fisk Biggar Scholarship in Moderns	Miss M. G. Stinson
The Hamilton Fisk Biggar Scholarship in Modern History	E. M. Gundy
The Reginald Heber Jolliffe Scholarship in English	D. G. Creighton (mention)
The Hodgins Prize in Pass English (Third Year)	H. E. Dougall
*The Daniel Wilson Scholarship in Biological and Medical Sciences	H. F. P. Grafton
*The Anna Howe Reeve Prize in Household Science	Miss E. A. Jerome

SECOND YEAR

The Hamilton Fisk Biggar Scholarship in Moderns	Miss M. E. Balkwill
The Hamilton Fisk Biggar Scholarship in English and History	Miss M. E. H. Adams
The Hamilton Fisk Biggar Scholarship in Philosophy, English and History	J. A. Irving
The Hamilton Fisk Biggar Scholarship in Household Economics	Miss S. M. Hughson
The James G. Burns Scholarship in Chemistry and Mineralogy	No award
The Essa Vandusen Dafoe Scholarship in French (Special)	Miss M. E. Balkwill
*The John Macdonald Scholarship in Philosophy	C. A. Baxter
*The Tracy Prize in Ethics	C. E. J. Cragg
Webster Prize (in Second Year Pass English)	Miss S. M. Hughson

FIRST YEAR

The Robertson Scholarship in Classics	J. E. Liddy
The Hamilton Fisk Biggar Scholarship in Philosophy, English and History	C. E. J. Cragg
The Hamilton Fisk Biggar Scholarship in English and History	Miss K. J. Lamont
The Hamilton Fisk Biggar Scholarship in Pass Course	H. B. Hendershot

## A P Misener Scholarship (Oriental Languages)—

Eligible according to examination in the  
following order . . . . .

1 A G. Hewitt  
2. N T. Chappel

\*The Scholarship in Mathematics . . . . . M. A. Nicholas

\*Third Alexander T. Fulton Scholarship in

Natural and Physical Sciences . . . . . H. B. Collier

Class of 1902 (First Year Pass English) . . . . . Miss A. E. Cosh °

Regents' Prize (First and Second Year English

Essays) . . . . . Miss M. E. H. Adams } (aeq.)  
J. A. Irving

## ALL THE YEARS

The Lincoln G. Hutton Scholarship . . . . . Miss M. M. Hutcheson

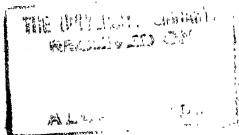
The Lily Denton Keys Prize in English Essays N. J. Endicott

The Moss Scholarship . . . . . Miss A. M. Hilliard

Essays . . . . . E. M. Gundy

## JUNIOR MATRICULATION, 1923

The Flavell Scholarship (Classics) . . . . . No award



# AFFILIATED COLLEGES

## ALBERT COLLEGE

BELLEVILLE, ONT.

FOUNDED 1854

### FACULTY

THE REV. E. N. BAKER, M.A., D.D., *Principal*.

ELLA GARDINER, B.A., *Lady Principal*

T. C. McMULLEN, M.A., PH.D., F.C.I.C., *Dean of Residence*.

H. R. JOLLIFFE, B.A.,

F. R. BAMFORTH, M.A.

D. R. ARGUE.

BROCK CHAPMAN, B.A.

V. P. HUNT, A.A.G.O.

S. M. ANGLIN, B.A.

BESSIE HANDLEY, A.T.C.M.

JESSIE TUITE, L.L.C.M.

MRS. JEAN BAKER

### COURSES IN STUDY

- I Collegiate Course, embodying elective undergraduate studies
- II. Junior and Senior Matriculation in Arts, Engineering, Law, Medicine and Theology.
- III. Teachers' Course, to prepare for teachers' examinations
- IV. Preliminary Course, as prescribed by the General Conference of the Methodist Church
- V. Depts. of Religious Education
- VI. Musical Course in Musical Academy, comprising Pianoforte Course, Organ Course, Post Graduate Course and Voice Culture.
- VII Courses in Elocution, Physical Culture and Deportment

ALMA COLLEGE  
ST. THOMAS, ONT.

OPENED, 1881.

ADMINISTRATIVE OFFICERS

SAMUEL DWIGHT CHOWN, M.A., D.D., LL.D...	President of Board.
W. F. THOMAS...	Chairman of Executive.
P. S. DOBSON, M.A. (Oxon.), D.D.	Principal.
OLIVE ZIEGLER, B.A.	Dean of Residence.
HARRIETT JOLLIFFE	Registrar.

LITERARY DEPARTMENT.

OLIVE ZIEGLER, B.A.	Religious Education, English.
P. S. DOBSON, M.A.	Latin.
KATHLEEN BOWLBY, B.A.	Mathematics, Science.
MARGARET THOMSON.	Preparatory Studies.
MRS. P. S. DOBSON, B.A.	French, German.
LOUISE ADDISON, B.A.	History, English.

MUSIC

THOMAS MARTIN, Director	Pianoforte, Concert Solos.
GEORGE C. CARRIE.	Organ, Harmony, Choral, Vocal.
HARRIETT B. JOLLIFFE, A.A.C.M.	Pianoforte.
CLETA FORD, A.T.C.M.	Pianoforte.
NANCY POOLE, L.R.A.M.	Violon.
MARGARET MACFIE, A.T.C.M.	Pianoforte.
MRS. NELLO MCHARDY-SMITH	Piano.

FINE ARTS

EVA ST. THOMAS SMITH	Painting, Modelling and Sketching.
S. M. MCKAY	China Painting.
OLIVIA TILTON.	Artcraft.

COMMERCIAL SCIENCE

CASSIE MCLENNAN	Bookkeeping, Phonography, Typewriting and Penmanship.
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ELOCUTION AND PHYSICAL EDUCATION

MAY BELLE ADAMS. . . . .	<i>Reading, Expression.</i>
IVEAGH MUNROE . . . . .	<i>Physical Education.</i>

HOUSEHOLD SCIENCE

ANNE FLEMING . . . . .	<i>Cookery, Dietetics, Sewing.</i>
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DIPLOMA COURSES

- (a) M.E.L., embracing two years General Course in Arts with options and additional subjects in Bible Study, English, etc.
- (b) Music (Piano, Organ, Voice or Violin).
- (c) Fine Art.
- (d) Physical Education.
- (e) Commercial and Shorthand.
- (f) Home Economics.
- (g) Expression.





TRINITY COLLEGE



## TRINITY COLLEGE

### I. TRINITY COLLEGE, WITH RESIDENCE FOR MEN

J. A. WORRELL, K.C., M.A., D.C.L., *Chancellor*.  
THE REV. C. A. SEAGER, M.A., D.D., LL.D., *Vice-Chancellor and Provost*.  
L. C. A. HODGINS, M.A., *Dean of Residence*.  
J. N. WOODCOCK, M.A., *Registrar*.  
W. A. KIRKWOOD, M.A., Ph.D., *Dean of the Faculty of Arts*.  
C. A. SEAGER, M.A., D.D., LL.D., *Dean of the Faculty of Divinity*.  
R. E. L. KITTREDGE, M.A., *Librarian*.  
REV. S. CHILDS, B.A., B.D., *Extension Secretary and Clerk of Convocation*.  
SYDNEY H. JONES, ESQ., *Bursar and Secretary of Corporation*.

### II. ST. HILDA'S COLLEGE—RESIDENCE FOR WOMEN

MISS M. CARTWRIGHT, B.A., *Principal and Dean of Women Students*.  
MISS STRACHAN, *Assistant*.  
MISS COTTERILL, *Assistant*.  
SYDNEY H. JONES, ESQ., *Bursar*.

Trinity College, which entered into federation with the University of Toronto on the first day of October, 1904, was founded by the Honourable and Right Reverend John Strachan, D.D., LL.D., first Bishop of Toronto, one of the founders, and at one time President, of King's College. It was established, after the secularisation of King's College in 1850, for the purpose of combining religious instruction with a liberal education.

In 1851 Trinity College was incorporated by the Legislature of Canada. In 1852 a Royal Charter conferred upon it University powers, which were exercised in all Faculties down to 1904, under the style of the University of Trinity College. Since 1904 Trinity College has conferred degrees only in the Faculty of Divinity.

For a certain period state aid was granted to it in common with the other Universities of the Province, but this was subsequently withdrawn. In 1874 the question of federation was mooted, but no serious attempt at a solution was made till about the year 1885; and it was not till nearly twenty years later that satisfactory terms of federation were finally concluded.

Under the Federation Agreement, the degrees in Arts are conferred by the University of Toronto, the instruction being given by Trinity College in all College subjects, and by the University in the remaining subjects of the Arts curriculum, and Trinity College students having access without extra fees to the University classes and laboratories. In the Faculty of Divinity, Trinity College continues to exercise the functions of an inde-

pendent University, having no relation to the University of Toronto in respect of degrees in this Faculty.

St. Hilda's College was founded in 1888 by the Rev. Dr. Body, the second Provost of Trinity College, to provide a residence for the women students of Trinity College, together with instruction in certain subjects of the Arts course. Later such instruction was discontinued in favour of complete co-education, St. Hilda's continuing to be the residence for women students of Trinity College.

Religious instruction for all its students in Arts having been one of the chief reasons for the foundation of Trinity College, this still remains one of its distinguishing features, the federation agreement with the University of Toronto preserving this right in perpetuity to all students of Trinity College.

Residence is another advantage offered by the College, accommodation being provided for men students. Here they come into close contact daily with one another and with the members of the staff, both resident and non-resident. In this way one very important element in education is provided.

The women students attend lectures with the men, and reside in St. Hilda's College, which offers to women all the advantages which are offered to men by the residence of Trinity College. All the women students, resident and non-resident, come under the supervision of the Dean of Women Students, Miss M. Cartwright, B.A., who is also Principal of St. Hilda's College.

On week days both men and women attend the morning and evening services of the Chapels of their respective colleges. On Sundays they attend the Trinity College Chapel together, this latter regulation applying to residents and non-residents alike.

Though the College belongs to the Church of England, it is open without religious tests to members of other communions. They are allowed to absent themselves from the Chapel services on Sundays on stating to the Provost their intention to attend a church of their own denomination, on the understanding that they will present a certificate of attendance, so as to satisfy the College regulations in this respect.

Members of other communions are not required to take the courses of study prescribed in the Church Catechism and the Prayer Book, but are allowed to substitute for them courses in Church History, the Evidences of Christianity, Christian Ethics, or New Testament Greek.

All students are required to keep term in lectures and chapels, and upon enrolling are placed under promise to obey the rules and regulations of the College.

Tuition (or registration) fees for regular and special students are the same as are paid in the other Colleges and are payable to the Bursar of Trinity College.

Particulars as to fees for board and room, etc., may be obtained by applying to the Provost or the Registrar.

## HAZING

Every student of Trinity College is required to sign the following declaration.—

"I do solemnly promise, that so long as I remain a student of this College—

1. I will discountenance all proceedings commonly known as hazing and will do my utmost to promote a healthy tone of feeling against them.

2. And, in particular, I will not interfere in any way with the personal liberty of any student, as, for example, by entering into, or remaining in, his room against his will; and I will not subject any student, or countenance his being subjected, to any indignity of any kind whatsoever.

These promises I make, fully understanding that any violation of them will render me liable to immediate expulsion from the College."

## UNIVERSITY DISCIPLINE

Every regular student of Trinity College must conform to the regulations of the University when in attendance upon University lectures and examinations. He must also pay the Hart House, Library, and other University fees to the Bursar of the University

## KEEPING TERMS

The College regulations require regular attendance at Lectures, 80 per cent of Lectures being necessary to the keeping of term.

Students in Arts who are regarded as being unsatisfactory in respect to their work or conduct, will not be certified to the Registrar of the University for admission to the Annual Examination of the University in May

## NON-MATRICULATED STUDENTS

Students may be admitted to College by the Provost without matriculation if he deems them to be sufficiently advanced in their studies to profit by the lectures.

## GOVERNMENT OF THE COLLEGE

By the provisions of the Royal Charter, the government of the University of Trinity College is vested in the Corporation, which body, by an Act of the Legislature of the Province of Canada (15 Vict. ch. 32), is composed of: 1. The Bishops of the six Dioceses into which the original Diocese of Toronto has been divided; 2. The Trustees, 3. The Council.

The Council is made up of the following classes of members:

EX OFFICIO MEMBERS

The Chancellor and ex-Chancellors of the University of Trinity College, the Provost, the Deans of Residence, Arts, and Divinity, the Registrar of Trinity College and the Librarian, the Chairman of Convocation, and the Headmaster of Trinity College School, Port Hope

MEMBERS NOMINATED

By the Synod of each Diocese of the Province of Ontario, two clergymen and two laymen.

By the Bishops of Ottawa, Algoma, Ontario, Huron, Toronto and Niagara, four members each, representing their respective Dioceses, or two only, if the Synod of the Diocese elects members.

By each Medical, Musical, or Theological College affiliated with the University of Trinity College, one member.

MEMBERS ELECTED

By the College Committee, one of the professors.

By the graduates in Arts and Divinity who are members of Convocation (see below) eight members, to hold office for four years, two retiring annually

By the graduates in Law two members, to hold office for two years, one retiring annually.

By the graduates in Medicine who are members of Convocation two members, to hold office for two years, one retiring annually.

By the associate members of Convocation (see below) two members, to hold office for two years, one retiring annually.

By the sustaining members of Convocation, two members, to hold office for two years, one retiring annually.

By the whole Corporation ten members, elected for four years, of whom at least two shall be engaged in educational work in the High School system of the Province.

CHANCELLOR

J. A. WORRELL, K.C., M.A., D.C.L.

VICE-CHANCELLOR AND PROVOST

THE REV. CHARLES ALLEN SEAGER, M.A., D.D., LL.D.

## THE CORPORATION

## THE BISHOPS

THE MOST REVEREND THE LORD ARCHBISHOP OF ALGOMA.  
 THE RIGHT REVEREND THE LORD BISHOP OF HURON.  
 THE RIGHT REVEREND THE LORD BISHOP OF TORONTO.  
 THE RIGHT REVEREND THE LORD BISHOP OF NIAGARA.  
 THE RIGHT REVEREND THE LORD BISHOP OF OTTAWA.  
 THE RIGHT REVEREND THE LORD BISHOP OF ONTARIO.

## TRUSTEE

THE HONOURABLE FEATHERSTON OSLER, K.C., D.C.L.

## COUNCIL

I. *Ex Officio Members.*

THE CHANCELLOR OF THE UNIVERSITY OF TRINITY COLLEGE, K.C., M.A., D.C.L.; THE REVEREND THE PROVOST OF TRINITY COLLEGE, M.A., D.D., LL.D.; THE DEAN OF RESIDENCE, M.A.; THE REGISTRAR OF THE UNIVERSITY OF TRINITY COLLEGE, M.A.; THE DEAN OF THE FACULTY OF ARTS, M.A., D.D.; THE REVEREND THE DEAN OF THE FACULTY OF DIVINITY, M.A., D.D., LL.D., THE LIBRARIAN OF TRINITY COLLEGE, M.A., C. M. BALDWIN, M.A., CHAIRMAN OF CONVOCATION, THE REVEREND F. GRAHAM ORCHARD, M.A. (*Contab.*), D.D., Headmaster of Trinity College School, Port Hope

II *Representative Elected by the Staff.*

A. H. YOUNG, D.C.L., *Professor of German.*

III. *Elected by the Corporation*

THE REV. PROF. C. J. S. BETHUNE, M.A., D.C.L., Toronto; MAJOR-GEN. SIR HENRY M. PELLATT, C.V.O., D.C.L., Toronto; \*SIR EDMUND OSLER, Toronto; PETER PERRY, M.A., Fergus; J. A. HOUSTON, M.A., Toronto; KIRWAN MARTIN, M.A., Hamilton; A. H. CAMPBELL, B.A. (*Tor.*), Toronto; ELMES HENDERSON, M.A., Toronto, LIEUT.-COL. HENRY BROCK, D.C.L., Toronto, JOHN CATTO, Esq., Toronto

IV. *Nominated by the Archbishop of Algoma.*

THE VENERABLE GOWAN GILLMOR, D.D., Sault Ste. Marie, *Archdeacon of Algoma*; THE REVEREND CANON PIERCY, Sturgeon Falls; THE REVEREND CANON BURT, L.Th., Parry Sound, THE REVEREND F. H. HINCKS, M.A., Haileybury.

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\*Deceased

*V Nominated by the Bishop of Huron.*

THE REVEREND CANON C. R. GUNNE, M A., London.

*VI. Elected by the Synod of Huron*

HIS HONOUR JUDGE HARDY, Brantford, THE VENERABLE J. B. FOTHERINGHAM, B.A , Brantford, *Archdeacon of Elgin*

*VII. Nominated by the Bishop of Toronto.*

THE REVEREND CANON PLUMPTRE, M A , Toronto, THE REVEREND CANON RIGBY, M.A., LL.D., Port Hope; THE HONOURABLE MR. JUSTICE ORDE, Toronto.

*VIII. Nominated by the Bishop of Niagara*

THE VERY REVEREND D. T OWEN, D.D., Hamilton, *Dean of Niagara*, W. M BRANDON, B A , B.C.L , Hamilton.

*IX Elected by the Synod of Niagara*

THE REVEREND CANON R. H. FERGUSON, M A., B.D., Guelph; E. T. LIGHTBOURN, Esq., Oakville; C S SCOTT, Esq., Hamilton; THE REVEREND CANON BROUGHALL, M A., St Catharines.

*X. Nominated by the Bishop of Ottawa*

THE REVEREND G. A. BRUNET, B A., Pakenham; THE REVEREND H. A. E CLARKE, M.A., Bell's Corners

*XI. Elected by the Synod of Ottawa.*

THE REVEREND J. H. DIXON, M A , B.D., Ottawa, CHAS. MORSE, K.C., D C L , Ottawa, J. S. L McNEELY, M A , Perth, THE REVEREND H. H BEDFORD-JONES, M.A., D D., Perth.

*XII. Nominated by the Bishop of Ontario*

THE VERY REVEREND G. L. STARR, M A , D.D , Kingston, *Dean of Ontario*; THE VENERABLE O G. DOBBS, M.A., Kingston, *Archdeacon of Kingston*.

*XIII Elected by the Synod of Ontario*

THE REVEREND A. L. MCTEAR, L TH., Trenton, THE REVEREND V. O. BOYLE, M.A., B.D., Athens; J. B. WALKER, K.C., *Chancellor of the Diocese*, Kingston W. B. CARROLL, K.C , Gananoque.

*XIV. Nominated by Trinity Medical College.*

J. H. McCONNELL, M.D., C.M., Toronto

*XV. Nominated by the Ontario Medical College for Women*

R. B. NEVITT, B A., M.D , C.M , Toronto.

XVI. *Nominated by the Toronto Conservatory of Music.*

ALBERT HAM, MUS.DOC, F.R.C.O., Toronto.

XVII. *Elected by Convocation*(a) *Graduates in Arts and Divinity.*

THE REVEREND CANON J. S. BROUGHALL, M.A., Toronto, and G. C. HEWARD, M.A., Toronto, to hold office to 1924, THE REVEREND R. C. BLAGRAVE, B.A., D.D., Peterborough, and R. J. READE, M.A., M.D., C.M., Toronto, to hold office to 1925; R. B. BEAUMONT, M.A., Toronto, and THE REVEREND WALTER H. WHITE, M.A., Toronto, to hold office to 1926; COL. C. S. MACINNIS, C.M.G., K.C., M.A., Toronto, and THE REVEREND CANON PLUMMER, L.Th., Toronto, to hold office to 1927.

(b) *Graduates in Law.*

D. T. SYMONS, K.C., B.C.L., Toronto, to hold office to 1924, THE HONOURABLE MR. JUSTICE HODGINS, Toronto, to hold office to 1925

(c) *Graduates in Medicine.*

GEO. STEWART CAMERON, M.D., C.M., Peterborough, to hold office to 1924; FRED. LE M. GRASSETT, M.B., C.M., Toronto, to hold office to 1925.

(d) *Elected by Associates of Convocation.*

F. GORDON OSLER, ESQ., Toronto, to hold office to 1924, JOHN C. WEDD, ESQ., to hold office to 1925

(e) *Elected by Sustaining Members of Convocation.*

FRED. W. FEE, ESQ., Ottawa, to hold office to 1924, C. M. BALDWIN, M.A., Toronto, to hold office to 1925

XVII. *Elected by the Alumnae Association of St. Hilda's College.*

MAJOR G. B. STRATHY, to hold office to 1924; M. McLAUGHLIN, ESQ., to hold office to 1925.

## SECRETARY AND BURSAR

SYDNEY H. JONES, ESQ.

## HONORARY TREASURER

MAJOR-GEN. SIR H. M. PELLATT, C.V.O., D.C.L.

## AUDITORS

REV. C. A. SEAGER (*honorary*), MESSRS. WELCH, CAMPBELL and LAWLESS, *Chartered Accountants.*

## COMMISSION ON POLICY AND BUILDINGS

COL. H. C. OSBORNE, C.M.G., Ottawa, *Chairman*.  
 GERALD R. LARKIN, Esq., Toronto, *Vice-Chairman*.  
 VAUGHAN MACLEAN HOWARD, Esq., Toronto, *Secretary*.

The Chancellor.	Col. C. S. MacInnes, C.M.G.
Chairman of Convocation.	Lt.-Col. Henry Brock.
The Provost	Major G. B. Strathy.
The Dean of Residence.	Dr. R. J. Reade.
Major-Gen. Sir Henry Pellatt	D. T. Symons, K.C., B.C.L.
Prof. A. H. Young, M.A., D.C.L.	C. S. Scott, Esq. (Hamilton).
A. H. Campbell, B.A.	F. W. Fee, Esq. (Ottawa).
Sydney H. Jones, Esq.	Major-General J. T. Fotheringham,
Angus Macdonald, M.A.	C.M.G.
Wilmot L. Matthews, Esq.	Dr. Graham Campbell.
George W. Morley, B.A., LL.B.	Dr. D. J. Goggin.
W. A. Child, M.A. (Hamilton).	Reverend T. C. S. Macklem, M.A.,
F. G. Osler, Esq.	D.D.

## CONVOCATION

Convocation, as at present organized, consists (in addition to the Chancellor, the Provost, the Vice-Provost, and the Professors of Trinity College) of all graduates who pay an annual fee of five dollars or upwards. It has been placed by the Corporation in the position of a Standing Committee of that body; and its members are in this way enabled, through their representatives, formally to lay their resolutions before the governing body of the University. Moreover, it is represented by fourteen members on the Corporation. (See above.) The Chairman is *ex officio* a member of the Corporation.

An annual meeting for the transaction of business is held every year in the Michaelmas Term.

Friends of the University who are not graduates may become associate members of Convocation by the same annual payment of five dollars or upwards. Subscribers of a hundred dollars and upwards annually are known as sustaining members.

Associate and Sustaining Members have the right of speaking and of voting at annual and other meetings of Convocation. They also elect annually four representatives to the Corporation.

The Chancellor of the University of Trinity College is elected for a period of five years by the graduate members of Convocation in good standing.

The Caput of Convocation, before which degrees are passed and conferred, consists of the Vice-Chancellor and four members of Convocation, to be elected by Convocation at the annual November meeting.

Since federation the only degrees conferred by the University of Trinity College are those in the Faculty of Divinity.



## CHAIRMAN OF CONVOCATION

C. M. BALDWIN, M.A.

## CLERK OF CONVOCATION

THE REVEREND S. CHILDS, B.A., B.D.

## EXECUTIVE COMMITTEE

(1) *Ex officio Members*—The Chancellor, the Chairman, the Clerk, the Provost, The Dean of Residence, The Registrar, the Dean of the Faculty of Arts, the Dean of the Faculty of Divinity, and former Chairmen of Convocation—J. A. Worrell, M.A., K.C., D.C.L.; D. T. Symons, K.C., B.C.L.; R. B. Beaumont, M.A.; and D. J. Goggin, M.A., D.C.L.

(2) *Elected Members:*

The Rev. Canon W. J. Brain, M.A.	H. G. Keen, B.A.
Miss M. Cartwright, B.A.	A. Angus Macdonald, M.A.
The Rev. P. J. Dykes, B.A.	J. W. S. Corley, K.C.
Philip Dykes, Esq.	The Rev. H. F. D. Woodcock, M.A.
G. C. Heward, M.A.	The Rev. W. H. White, M.A.
Sydney H. Jones, Esq.	A. H. Young, M.A., D.C.L.

## SCHOLARS AND PRIZEMEN

1924

## ARTS

## FOURTH YEAR—

HIS Excellency the Governor-General's Silver Medal for the Best Degree—Miss A. E. Gillard.

HIS Excellency the Governor-General's Bronze Medal for Headship of St. Hilda's College—Miss A. E. Groat.

The Prize in the Pass Course—Miss A. E. Gillard.

The Jubilee Scholarship—F. A. M. Smith.

## THIRD YEAR—

Prize for English Essay—G. Sparling.

Honourable Mention—Miss A. N. Wilson.

English Poem—No award.

Honourable Mention—C. V. Kister.

## MATRICULATION SCHOLARSHIPS

1923

Dickson Scholarship in Moderns—R. Turnbull, of Ridley College, St. Catharines.

Wellington Scholarship in Mathematics—Won by R. Turnbull, of Ridley College—Awarded by Reversion to D. G. McCullagh, of Cobourg C.I.

Burnside Scholarship in Science—Miss L. N. Farrell, of Parkdale C I., Toronto.

## DIVINITY CLASS PRIZE LIST

## FOURTH YEAR—

*General Proficiency*—G. N. Luxton.

*Dogmatic Theology*—G. N. Luxton.

## THIRD YEAR—

*General Proficiency*—James Hutton.

*Church History*—J. S. Smedley.

## BOTH YEARS—

*Greek Testament*—G. N. Luxton.

*Hebrew*—T. S. Gault, B.A.

*Comparative Religion*—G. N. Luxton.

*Old Testament*—Rev. W. G. Luxton, B.A.

*New Testament*—G. N. Luxton.

*Patristics*—R. T. C. Dwelly, B.A.

*Liturgics IV.*—G. N. Luxton.

*Liturgics III.*—J. Hutton.

*Sermon Prize*—G. N. Luxton.

## MCDONALD PRIZES FOR BIBLE KNOWLEDGE—

1. G. N. Luxton.

2. T. S. Gault, B.A.

3. J. Hutton

## ESSAY PRIZE—

G. N. Luxton.

## THE HAMILTON MEMORIAL PRIZE—

G. N. Luxton.

## READING PRIZES—

*College Prize*—D. R. Dewdney.

*Doolittle Prize*—A. R. Holden.

*Osler Prizes*—1 J. M. Brownlie.

2. A. R. Holden.

3. D. R. Dewdney.



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ST. MICHAEL'S COLLEGE

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## ST. MICHAEL'S COLLEGE

St. Michael's College was founded in 1852, at the request of the Rt. Rev. Dr. de Charbonnel, then Bishop of Toronto. It was established for the purpose of combining religious instruction with a liberal education.

For a number of years it was granted state aid, in common with the other arts colleges of the Provinces. This came to an end when the Legislature of Ontario finally decided that no financial assistance should thereafter be given to denominational institutions.

In 1881, the College was affiliated with the University of Toronto, an arrangement having been entered into by which students proceeding to the degree of B.A. should attend lectures at University College in all subjects excepting Philosophy and History.

When in 1883-1884 a movement was on foot looking to the federation of every denominational college of the Province with the Provincial University, St. Michael's was the first to accept the terms proposed, and in 1890, federated upon the proclamation of the University Federation Act.

From the commencement it was understood that such arrangements could not be other than experimental, and meanwhile it became more and more apparent that the experiment must end in failure. After a quarter of a century of affiliation and federation, during which time the University population had been multiplied by five or six, there was scarcely any increase in the number of Catholic students attending University College. During those same years, the Catholic Colleges of the Province had been constantly increasing in the number of their students. It was evident that the plan in operation was not of the kind to secure the confidence of the Catholic population. That population evidently would not favour a purely secular education.

In 1905, St. Michael's found itself in a position to enter upon a scheme of providing instruction in all subjects known as "College Subjects", and made application to be admitted to federation on the same terms as Victoria and Trinity Colleges, claiming with them the privilege of free instruction for its students in University subjects. In response to this application, provision was made in the University Act of 1906 for the development of this scheme, upon the completion of which St. Michael's succeeds to the rank and privileges of a "College of the University". This plan has been worked out with the most satisfactory results.

The Catholic Church does not understand education without religious instruction. In St. Michael's, in every year of the student's course, a due proportion of time is reserved for this, and for the preservation of the religious spirit the greater number of the staff is chosen from the ranks of

the clergy. It must be remembered, however, that St. Michael's is purely an Arts College, and has no theological faculty as such.

It is held as a fundamental principle, that the intimate association of students with one another, and with their teachers, contributes as much to true education as do the lecture room and library. In accordance with this, the majority of the students live in residence. The men students reside at St. Michael's College, the women students reside at St. Joseph's College, or Loretto Abbey College, and are subject from the point of view of discipline to the religious communities in charge of these institutions.

#### ADMINISTRATIVE OFFICERS

REV. H. CARR, B.A., LL.D. ....	<i>Superior.</i>
REV. H. S. BELLISLE, M.A. ....	<i>Director of Studies.</i>
REV. J. B. WALSH, M.A. ....	<i>Bursar.</i>
REV. E. J. MCCORKELL, M.A. ....	<i>Registrar.</i>

#### MEDALS, SCHOLARSHIPS AND PRIZES 1924

##### FOURTH YEAR—

The Mercier Medal for the highest first class honours in Philosophy—L. Barnett.

The Sir Bertram Coghill Alan Windle Medal to the student ranking highest in Honour English—

J. V. Burke	} aeq.
E. C. LeBel	

The Dockeray Prize to the student ranking highest in Pass English—Miss M. Campbell.

The Belcourt Prize in French—Miss A. Kavanagh.

##### THIRD YEAR—

The Phelan Prize to the student ranking highest in Honour English—No award

The Kernahan Prize for highest first class honours in Philosophy—

T. Murtha	} aeq.
T. McLaughlin	

The Dockeray Prize in Pass English—F. Flaherty.

##### SECOND YEAR—

The Kernahan Prize for the highest first class honours in Philosophy—No award.

The English Prize to the student ranking highest in Pass English—

Miss L. Burcher	} aeq.
Miss M. Coughlin	

The Hughes Prize in Honour English—Miss P. M. Blake.

## FIRST YEAR—

The English Prize to the student ranking highest in Pass English—  
Miss A. O'Brien.

Knights of Columbus Scholarships to the four students ranking highest  
in general proficiency—Geo. Power, Miss A. O'Brien, C. O'Keefe,  
F. Mallon.

## JUNIOR MATRICULATION—

The Silver Episcopal Jubilee Scholarship—Miss F. Johnston.

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FACULTY OF MEDICINE

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## DEGREES AND DIPLOMAS IN MEDICINE

1. The thirty-ninth session since the re-establishment of the Faculty of Medicine of the University of Toronto will commence on Tuesday, September 29th, 1925.

2. The Degrees in Medicine are Bachelor of Medicine—M.B., Bachelor of Science—B.Sc. (Med.), Doctor of Medicine—M.D., and Master of Surgery—Ch.M.

The Diplomas in Medicine are:—Diploma of Public Health—D.P.H., and Diploma in Radiology—D.R.

### DEGREE OF BACHELOR OF MEDICINE

3. Candidates for the degree of Bachelor of Medicine are required to matriculate and to attend during six sessions of at least eight months each the courses of instruction presented, and to pass examinations taken at the end of each session.

### ENTRANCE REQUIREMENTS

4. Details in individual cases as to entrance requirements to the University, may be obtained on application to the Registrar of the University.

5. A candidate for admission to the First Year in the Faculty of Medicine must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register; only under exceptional circumstances will a candidate of thirty years or more be admitted.

He must also present certificates giving him *full* credit in the following subjects of Pass and Honour Matriculation:

#### PASS MATRICULATION

LATIN (Authors and Composition).

ENGLISH (Literature and Composition).

HISTORY (British and Ancient).

MATHEMATICS (Algebra and Geometry).

EXPERIMENTAL SCIENCE (Physics and Chemistry).

Any one of—

GREEK (Authors and Composition).

FRENCH (Authors and Composition).

GERMAN (Authors and Composition).

SPANISH (Authors and Composition).

ITALIAN (Authors and Composition).

## HONOUR MATRICULATION

ENGLISH (Literature and Composition).

MATHEMATICS (Algebra, Geometry and Trigonometry).

One of:

LATIN (Authors and Composition).

GREEK (Authors and Composition).

FRENCH (Authors and Composition).

GERMAN (Authors and Composition).

NOTE: Physics or Chemistry or Botany or Zoology of Honour Matriculation may be substituted for Trigonometry.

6. Students are required to complete above matriculation requirements before being admitted to the course in Medicine.

7. A student who has fully completed the First Year in the Faculty of Arts of the University of Toronto, will be admitted to the First Year in the Faculty of Medicine, provided he has at least Pass Matriculation standing in Experimental Science. No fee will be charged for transferring from the Faculty of Arts to that of Medicine.

8. A candidate possessing a degree in Arts from any recognized University may be considered as having fulfilled the entrance requirements.

9. A candidate coming from a Province of Canada other than Ontario must present certificates of a standard equivalent to that required from students of the Province of Ontario.

10. A candidate for admission from the British Isles must present a certificate of registration as a medical student with the General Medical Council of Great Britain.

## APPLICATION FOR EQUIVALENT STANDING

11. Any student of another University or College who desires to be admitted to the Faculty of Medicine of this University with equivalent standing is required first to communicate with the Registrar of the University, forwarding to him a full statement of preliminary education with certificates. After receiving notice from the Registrar that the entrance requirements have been met, the student should send an application to the Secretary of the Faculty of Medicine together with—

(a) A calendar of the University in which he has studied, giving a full statement of the courses of study.

(b) A complete official statement of the course he has followed and the standing obtained in percentage.

(c) A certificate of moral character and conduct.

After submission of this application to the Faculty Council the candidate will be notified as to the decision reached.

No student from a Medical Faculty of another University will be accepted unless his certificates show that he has completed the work and examinations in the subjects for which the certificates are presented.

## REGISTRATION

12. Students desiring to enter the course in Medicine are required to submit their application form in duplicate along with the certificates on which they claim entrance standing, to the Registrar of the University, in Simcoe Hall, on or before September 1st. After this date each candidate will be notified as to whether his application has been accepted or not, a card of admission being enclosed to those applicants who are accepted.

13. On presentation of this card on or before the day of registration (September 29th) to the Secretary of the Faculty of Medicine, candidates will be officially registered by him as students in Medicine.

14. Students in the Second and higher years will receive by mail from the Secretary, an application form for registration in the succeeding year. This form must be filled in and forwarded to the office of the Secretary of the Faculty of Medicine on or before September 1st.

15. On September 29th a student must present himself in person for his registration card which gives his number, section and class. No student shall be allowed to register in the Faculty of Medicine after the first day of term. No student shall be admitted to any laboratory or clinical class after its first meeting except at the discretion of the instructor concerned.

16. No student will be permitted to register in the second or any succeeding year until he has completed all the examinations of the preceding year.

17. Only under exceptional circumstances will a student be permitted to repeat his year more than once.

18. Subdivision into sections and clinical classes will be made by the Secretary. Students wishing to be placed in the same section or clinical class must file personally signed applications conjointly with the Secretary on or before June 1st.

## ATTENDANCE

19. Students are required to attend lectures and receive practical instruction during each of the six years at this University.

20. A student who fails to do satisfactory term work in any subject is not permitted to present himself for examination.

21. In cases of students applying for temporary positions in hospitals, laboratories or for *locum tenens* to physicians, the permission of the Faculty Council must be obtained before they will be allowed to absent themselves from the lectures and laboratory work of the University.

22. Students who have completed the work of the Fifth Year are required, before commencing the course of studies of the Sixth Year, to

undertake field work in Public Health and Preventive Medicine. This course may be taken either in June or September.

Assignment of students to Health Departments, arrangement of time when the course is to be taken and the syllabus of work will be arranged for by the Department of Hygiene and Preventive Medicine before the close of the work of the Easter Term in the Fifth Year.

23. *No applications or petitions for exemptions from classes, laboratory work or examinations will be received or considered unless filed at the Secretary's office on or before October 15th of any year.*

## FEES

### REGULAR STUDENTS IN MEDICINE

24. All University fees are payable at the Bursar's office in Simcoe Hall between the hours of ten and one o'clock, except on Saturday.

25. REGULAR STUDENTS. First, Second, Third, Fourth, Fifth and Sixth Years—Annual Fee, including tuition, library, laboratory supply, hospital\* and one annual examination—

If paid in full on or before November 10th.....	\$150 00
By instalments—	
First instalment, if paid on or before November 10th. ....	75 00
Second instalment, if paid on or before February 10th.....	78 00
Hart House and Students' Administrative Council fee, to be paid by all men students proceeding to the degree ..	11 00
Women Students' Administrative Council Fee, to be paid by all women students proceeding to the degree....	3.00

26 STUDENTS IN COMBINED COURSE IN ARTS AND MEDICINE.

Annual Fee, including college registration, library, laboratory supply, and one annual examination:

	Arts Fees.	Medical Fees.	Total.
First Year Arts.....	\$92 00		\$92 00
Second Year Arts.....	93.00		93 00
Third Year Arts and Second Year Medicine...	97 00	\$85.00	182.00
Fourth Year Arts and Third Year Medicine...	107 00	85 00	192 00

The fees for the Fourth, Fifth and Sixth Years in the Faculty of Medicine are as for regular students.

\*The composite fee of \$150.00 includes one session's clinical facilities at the Toronto General Hospital, St. Michael's Hospital, or Toronto Western Hospital, and the Hospital for Sick Children, but does not cover the midwifery ticket for the Burnside Lying-in Hospital, which must be paid in addition, to the Bursar.

## Payment of the Medical portion of the fees—

If paid on or before November 10th .....	\$85.00
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## By instalments—

First instalment, if paid on or before November 10th.....	43 00
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Second instalment, if paid on or before February 10th.....	44.00
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## 27. GRADUATE AND SPECIAL COURSES

(1) Graduates attending undergraduate courses per month	\$10 00
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(2) B.Sc. (Med.) Course. ....	25.00
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Fee for Examination.. ....	10 00
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(3) D.P.H. Course.....	150.00
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## By instalments:

1st instalment at the beginning of the Fall Session	75.00
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2nd instalment at the beginning of the Winter Session....	75 00
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Fee for the Diploma.....	20 00
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(4) Short Course in Radiology.....	100 00
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(5) Diploma in Radiology.....	400 00
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28. All of the above fees are payable in advance. After November 10th, a penalty of \$1.00 per month will be imposed until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply. Students must have paid fees due in first term before proceeding to the work of the second term. A student will not be admitted to any of the University lectures or laboratories who is in arrears for his fees.

## 29. GENERAL FEES.

Matriculation, or registration of Matriculation.....	\$5 00
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Supplemental examinations... ..	10.00
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Admission <i>ad eundem statum</i> .. ..	10.00
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Degree of M.B. ....	20.00
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Degree of B.Sc. (Med.) ... ..	10.00
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In the case of candidates for the Final Examinations, the fee for the degree must be paid to the Bursar not later than the 20th of March.

## HART HOUSE FEE

30. The annual fee.....	\$8.00
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Every male student in attendance, proceeding to a Bachelor's degree in the Faculty of Medicine is required to pay to the Bursar before December 1st the annual fee of eight dollars for the maintenance of Hart House. If this fee is not paid by the above date a penalty of two dollars will be imposed, making the total fee ten dollars.

## STUDENTS' ADMINISTRATIVE COUNCIL FEE

31. The annual fee.....	\$3 00
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Every male student in attendance proceeding to a Bachelor's degree in the Faculty of Medicine is required to pay to the Bursar at the time of the entry of his name with the Registrar the annual fee of three dollars for the maintenance of the Students' Administrative Council.

## WOMEN STUDENTS' ADMINISTRATIVE COUNCIL FEE

32. The Annual Fee... .. \$3 00

Every woman student in attendance, proceeding to a Bachelor's degree in the Faculty of Medicine, is required to pay to the Bursar at the time of the entry of her name with the Secretary, the annual fee of three dollars for the maintenance of the Women Students' Administrative Council.

## MEN'S PHYSICAL TRAINING FEE

- 33 The annual fee. .... \$5 00

Every male student in attendance proceeding to a Bachelor's Degree in the Faculty of Medicine is required to pay to the Bursar the annual Physical Training fee of \$5.00 at the opening of each session in which Physical Training is compulsory for that Student.

## WOMEN'S PHYSICAL TRAINING FEE

34. The annual fee . .... \$4.00

Every woman student in attendance proceeding to a Bachelor's Degree in the Faculty of Medicine is required to pay to the Bursar the Physical Training Fee of \$4.00 at the opening of each session in which Physical Training is compulsory for such student.

## SUPPLEMENTARY PHYSICAL TRAINING FEE

35. Supplemental fee .. .. \$10 00

Every student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year and who must take this work during the Second or Third Year respectively of his or her course, will be required to pay to the Bursar at the opening of the session a Supplemental fee of \$10 00, in addition to the prescribed Physical Training Fee.

## MEDICAL SOCIETY FEE

36. The annual fee. .... \$2.00

Every student in attendance proceeding to a Bachelor's Degree in the Faculty of Medicine is required to pay to the Bursar at the opening of the Session, an annual fee of \$2.00 for the maintenance of the Medical Society.

## MICROSCOPES

37. Every student entering the Faculty of Medicine in the Session 1925-1926 and thereafter will be required to provide himself at the commencement of the third year of his studies, with a microscope of approved design. The microscope must be of substantial construction, and be provided as a minimum, with the following accessories—Objectives—16 mm. 4 mm. and 1.8 mm. oil immersion, oculars  $\times 5 \times 10$ ; triple nose piece; and a substage condenser with an iris diaphragm. Such an instrument is an essential part of the equipment of a practitioner in medicine.

Arrangements may be made for the purchase of such an instrument on a deferred payment plan through the Faculty of Medicine.

## INSTRUCTION

38. The course of instruction given by the Faculty of Medicine in preparing students for the degree of M.B. consists of six sessions of eight months each.

The course is so framed that the requirements of the various Provincial Licensing bodies are fulfilled and it aims at giving the student such a training in the sciences as is now exacted of all those who desire to obtain any British Medical qualification in addition to a Canadian one

## OPTIONS OF PRIMARY YEARS

39. The student of Medicine is reminded that during his years of study he is preparing himself to enter a profession which presents manifold and diverse aspects. No prescribed course of study of practicable length can by any possibility fit the student for all of the special careers which the profession of medicine offers. The curriculum provided by the Faculty of Medicine is designed to furnish a framework of knowledge and technical skill which will adequately equip all students for the general practice of medicine and its branches, the time allotted for this purpose, in every subject of the course, being well in excess of that required as the minimum by examining boards and Universities in this and other countries. The six years' curriculum, however, also provides for the student filling in and amplifying his regular work with special studies that are designed either to broaden his general education, and therefore, make him better fitted for the practice of medicine, or to enable him to undergo, in certain of the subjects of the curriculum, a somewhat more intensive training than is essential for all students, so as to prepare him for some particular type of medical career. To enable the student to accomplish these purposes a number of hours of optional study is prescribed, the precise subjects of study being largely left to the student's choice. It is, however, expected that this choice will not be aimless, but made of set purpose and designed to some particular end.

Final selection of options should be made in consultation with the Class Adviser (see Par. 41).

The optional courses available in the six year curriculum are of two types, entitled for convenience, Cultural Options and Scientific Options. During the First Year no Scientific Options are available, but each student must take one Cultural Option, during the Second and Third Years he must take one Cultural Option and one Scientific Option.

The following subjects are available for options.

*First Year—Cultural Options*

English  
Mathematics

Scientific French  
Scientific German

*Second Year—Cultural Options*

English  
 Mathematics  
 Scientific French  
 Scientific German  
 History  
 Psychology  
 Economics  
 Philosophy

*Scientific Options*

Chemistry (Volumetric Analysis)  
 Physics  
 Biology (Heredity and Eugenics)

*Third Year—Cultural Options*

English  
 Mathematics  
 Scientific French  
 Scientific German  
 History  
 Psychology  
 Economics  
 Philosophy  
 History of Physiology

*Scientific Options*

Physics  
 Problems of Biology  
 Anatomy  
 Embryology  
 Parasitology  
 Cytology  
 Com. Neurology

The so-called "Cultural Options" are provided in order that the student may be afforded, through them, an opportunity of acquiring a somewhat broader field of interest than that provided by a curriculum confined strictly to Medical subjects. A student who has attained some insight into such subjects as History, Economics, English, Philosophy, etc., and who has learned to speak and write in a clear, simple and convincing manner, is necessarily better prepared to uphold the traditions of his profession by entering with intelligence into the life and interest of the community, than one whose outlook is restricted to the field of Medical Science.

The Scientific Options are provided in order to enable a student to perform more advanced work in the departments of Medical science in which he is especially interested. They also supply facilities for those students who wish to enter certain special fields after graduation, such as Psychiatry, Public Health or Laboratory Investigation. For example, the student who intends to devote himself to the study of Psychiatry is recommended to take the options in Psychology and Biology in his second year and Psychology in his third year. The student desiring to work in the field of Public Health is advised to take the course in Economics in order that he may comprehend the social and statistical aspects of such work, the course in Parasitology which will acquaint him with the structure, habits and control of disease-bearing insects, and that in Mathematics which provides the necessary familiarity with Statistical methods. The student interested in a career of laboratory investigation, should select that subject which best leads to his chosen field. He is reminded, however, that in all fields of Laboratory Research, Mathematics is of increasing



importance and he is therefore strongly urged to acquire a knowledge of elementary Calculus and of Statistical Methods by taking the Mathematics option in each of the first three years.

### OPTIONS OF FINAL YEARS

40. Students who have attained a certain standing in the courses of the first three years will be permitted to continue taking options during the 4th, 5th and 6th years. The time assigned for option courses during the 4th, 5th and 6th years will be seen to be sufficient for one option (64 hours). The subjects from which the options may be chosen during each of the years are given in the attached table.

An option in any one of the following Departments may be taken in the Fourth Year.

- |                  |                  |
|------------------|------------------|
| 1. Physiology.   | 4. Physics.      |
| 2. Biochemistry. | 5. Psychiatry.   |
| 3. Anatomy       | 6. Bacteriology. |

Options in any one of the following Departments may be taken during the Fifth Year, as follows:

- |                  |                               |
|------------------|-------------------------------|
| 1. Physiology    | 7. Pathological Chemistry.    |
| 2. Biochemistry. | 8. Bacteriology and Serology. |
| 3. Anatomy.      | 9. Hygiene.                   |
| 4. Physics.      | 10. Pathology.                |
| 5. Psychiatry.   | 11. Military Studies.         |
| 6. Pharmacology. |                               |

Options in any one of the following Departments may be taken in the Sixth Year as follows:

- |                               |                                 |
|-------------------------------|---------------------------------|
| 1. Physiology.                | 9. Hygiene.                     |
| 2. Biochemistry.              | 10. Pathology.                  |
| 3. Anatomy.                   | 11. Medicine.                   |
| 4. Physics.                   | 12. Surgery.                    |
| 5. Psychiatry.                | 13. Obstetrics and Gynaecology. |
| 6. Pharmacology.              | 14. Therapeutics.               |
| 7. Pathological Chemistry.    | 15. Other clinical subjects.    |
| 8. Bacteriology and Serology. | 16. Military Studies            |

Emphasis should be placed on the principle that no attempt is made in the optional classes of the later years, to train students as specialists. There are, for example, no options in subjects like laryngology, ophthalmology, radiology, etc., since it is believed unsound to train men to be specialists in these fields until they have thoroughly rounded out their medical or surgical education and have served a year as an interne in the hospital. On the other hand students who have definitely decided that their future career lies in one or other of the specialties will be privileged, during their option time, to take courses in the pre-medical or fundamental

sciences upon which these specialties depend. For example courses in Physics and Physiology dealing with the question of optics, acoustics, radiology, etc., are given.

#### STUDENT ADVISERS

41. In order to assist the student in making a correct choice of optional subjects, a student-adviser has been appointed for each year. Every student is required to submit to the adviser a list of his proposed studies and his time table, and the written approval of the adviser and the consent of the Faculty Council will be required before the student's registration will be considered to have been completed. It is understood that any coherent plan of study designed by the student for a particular and intelligible purpose will be approved, but courses of study which appear to be manifestly unsuitable, and for his choice of which the student can furnish no adequate explanation or excuse, will not be approved by the adviser.

Student Adviser for Class of 1926....	.....	DR. E. S. RYERSON.
Student Adviser for Class of 1927....	.....	PROF. C. L. STARR.
Student Adviser for Class of 1928 .		PROF. DUNCAN GRAHAM.
Student Adviser for Class of 1929..	....	PROF. A. HUNTER.
Student Adviser for Class of 1930... .	....	PROF. J. J. R. MACLEOD.
Student Adviser for Class of 1931. . .		PROF. H. WASTENEYS.

## 42. SUBJECTS OF INSTRUCTION

NUMBER OF HOURS SPENT IN DIDACTIC, LABORATORY  
AND CLINICAL WORK*First Year.*

Subject	Didactic	Laboratory	Total
Biology	60	210	270
Chemistry	60	180	240
Physics	90	180	270
Science and Civilization	60	.	60
English Expression	30	..	30
Option	60	.	60
Physical Training	..	...	60
	360	570	990

*Second Year*

Subject	Didactic	Laboratory	Total
Anatomy	30	420	450
Histology and Embryology	75	165	240
Chemistry	60	45	105
Physiology	20		20
Biochemistry		30	30
Option one	60	..	60
Option two		90	90
Physical Training	..	..	60
	245	750	1,055

*Third Year.*

Subject	Didactic	Laboratory	Total
Physiology (including Psychology)	120	180	300
Biochemistry	90	135	225
Bacteriology	.	165	165
Anatomy	60	180	240
Option one	60	..	60
Option two	..	60	60
	330	720	1050

*Fourth Year.*

Subject	Didactic	Laboratory	Clinical	Total
Medicine and Clinical Microscopy	90	..	180	270
Surgery	60	...	120	180
Pathology	90	270		360
Pathological Chemistry	.	60	..	60
Psychiatry	15	..	..	15
Pharmacology	30	90	.	120
Applied Anatomy	30	.	.	30
Option	.	60	..	60
	315	480	300	1,095

*Fifth Year.*

Subject	Didactic	Laboratory	Clinical	Total
Medicine (including Paediatrics)	45	.	300	345
Surgery	30	.	120	150
Obstetrics and Gynaecology	75	...	20	95
Pathological Chemistry	30	30	..	60
Ophthalmology	.	.	15	15
Oto-Laryngology	.	.	15	15
Hygiene and Preventive Medicine	45		.	45
Med. Juris. and Toxicology	30	..	.	30
Psychiatry	15	.	...	15
Therapeutics	45	...	10	55
Radiology	15	..	..	15
Applied Anatomy	30	...		30
Option	..	60		60
	360	90	480	930

*Sixth Year.*

Subject	Didactic	Laboratory	Clinical	Total
Medicine (including Paediatrics)		..	410	410
Surgery	30	..	190	220
Obstetrics and Gynaecology	30	..	140	170
Pathology	30	40	..	70
Ophthalmology	10	..	10	20
Oto-Laryngology	10	..	10	20
Hygiene and Preventive Medicine	.	..		112*
Psychiatry	.	..	10	10
Therapeutics	5	.	25	30
Radiology	.	40	..	40
Dentistry	5		..	5
History of Medicine	10		..	10
Medical Ethics	3	.	..	3
Life Insurance	2	..	..	2
	135	80	795	1,010

\*The student is required to spend this time in field work in Hygiene and Preventive Medicine between the Fifth and Sixth Years.

## COMBINED COURSE IN ARTS AND MEDICINE

43. It is possible for a student who takes this Biological and Medical Sciences Course, followed by the final years of the Medical Course, to obtain the degree of Bachelor of Arts at the end of four years and of Bachelor of Medicine after seven years study at the University. When entering the third year of the Arts course, these students register in the second year of Medicine and on entering their fourth year Arts, they register in the third year Medicine.

44. In the curricula of this Arts Course the Science subjects are treated more extensively than they are in the Medical curriculum.

45. The Biological and Medical Sciences Course completes the requirements of the first three years in Medicine. First and Second Years in the Biological and Medical Sciences Course are accepted as the equivalent to the First Year in Medicine. The first two years' work is the same as that for the Honour Arts' course in Physiology and Biochemistry. The students who proceed during the third and fourth years of the latter course take up the subjects of Physiology and Biochemistry *without specific reference to Medicine*.

46. Only those students who graduate from the Biological and Medical Sciences Course with Honour standing will be admitted to the fourth year in the Faculty of Medicine.

47. These courses not only afford opportunities for a broader training and greater scientific attainment than is possible in the six years' course in Medicine, but they fit the student for a much wider field of usefulness after graduation. The graduate who has taken one of these Science Courses in Arts and subsequently the Course in Medicine is qualified to devote his life to one of the purely scientific lines of Medicine, if he should so elect, after leaving the University, and, moreover, he is, undoubtedly, better fitted to practise his profession should he desire to prepare himself for that alone.

48. Students who proceed to the Arts degree through other Science Courses may, on entering the Faculty of Medicine, be allowed exemption from such subjects in Medicine as they have taken in the curricula of the Faculty of Arts.

## B.Sc (MED.) COURSE

49. The degree of B.Sc. (Med.) has been added to the curriculum in Medicine so as to encourage scholarship and research in the introductory medical sciences and in the sciences immediately accessory to medicine and surgery.

The degree is available to two classes of candidates, viz—

(1) Students of the Six Years' Course who have reached the end of the third or subsequent year and who have completed an additional year's work outside of the regular medical curriculum, on a basis of an instructional schedule and research, subject to.

(a) The work of the additional year shall consist in the main of one major and two minor subjects;

(b) The candidate will be accepted for registration only on recommendation of the departments in which these subjects lie, subject to the approval of the sub-committee in charge of the degree,

(c) The course in the major subject shall include a research\* problem;

(d) The candidate must pass an examination in the major and minor subject, to be conducted by the departments concerned;

(e) The candidate must show proficiency in reading one modern language other than English to the satisfaction of the department in charge of the major subject.

(2) Graduates of the Six Years' Course\* who have completed an additional year's work in some one introductory or clinical laboratory department, consisting chiefly of research, subject to the following conditions

(a) The candidate will be accepted for registration only on the recommendation of the department concerned, subject to the approval of the sub-committee in charge of the degree,

(b) The candidate must show proficiency in reading one modern language other than English to the satisfaction of the scientific department in charge of his work.

A sub-committee of the Committee on Curriculum and Examinations administers the degree of B.Sc (Med). All candidates must be approved by the sub-committee on the basis of their preliminary qualifications and the majors and minors selected by the candidate must be approved by this sub-committee

## ADMISSION TO EXAMINATIONS

50. Every student who proposes to present himself at the Annual or Supplemental Examinations must see that the Secretary has in his possession the following:—

1. *An Application for Examination.* The form supplied must be filled in, signed, and left in the Secretary's Office on or before March 15th. Students presenting applications after this date must pay an additional fee of One Dollar.

2. *A Certificate of Attendance* indicating that he has complied with the regulations respecting attendance upon didactic, laboratory and clinical work in each of the subjects of instruction for the year in which he seeks examination. This Certificate is issued by the University and must be signed by the Head of each Department after completion of the course of instruction.

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\*Until 1926, applications from graduates of the five year course will be considered, provided they are not of more than one year's standing.

51. *Candidates for the Degree of Bachelor of Medicine* are required to have on their Certificates of Attendance the following additional particulars:—

(a) A certificate of having conducted at least twenty labours under the supervision of the Head of the Department of Obstetrics and Gynaecology.

(b) A certificate of proficiency in vaccination, from the Head of the Department of Hygiene.

(c) A certificate of having attended fifteen autopsies under the supervision of the Head of the Department of Pathology.

(d) A certificate of having administered anaesthetic on six occasions, under the supervision of the Head of the Department of Therapeutics.

52. No candidate will be admitted to the Annual or Supplemental Examinations unless he has paid all the fees due from him.

53. No candidate in a course involving practical work in a laboratory or clinic will be admitted to the Annual or Supplemental Examinations if the Professor under whom his work is carried on reports in writing to the Secretary that he has not done satisfactory laboratory or clinical work, or has signally failed in the practical examinations.

54. Undergraduates who have been prevented from attending the Annual Examinations by sickness, domestic affliction, or other causes beyond their control, may make application for permission to present themselves for examination at the Supplemental Examinations in September, and must give satisfactory evidence of the cause of absence.

## EXAMINATIONS

55. The Annual Examinations are held in May at the end of the First, Second, Third, Fourth, Fifth and Sixth academic years, and the Supplemental Examinations in September.

56. The minimum pass standard in each subject of examination is 50%.

## SUBJECTS OF THE ANNUAL EXAMINATIONS

### 57. FIRST EXAMINATION.

1. Biology.
2. Chemistry.
3. Physics.
4. Science and Civilization and English Expression.
5. Option.

Candidates who fail in any subject or subjects at the Annual Examinations may present themselves at the Supplemental Examinations next ensuing.



Candidates who fail in any subject or subjects at the Supplemental Examinations will only be permitted to register again to repeat the First Year of the course under very exceptional circumstances and must obtain the permission of the Faculty before being allowed to register.

(The students' attention is particularly drawn to paragraph 16 page 13).

#### 58. SECOND EXAMINATION.

1. Anatomy.
2. Histology, Embryology.
3. Organic and Physical Chemistry.
4. Option one.
5. Option two.

#### 59. THIRD EXAMINATION

1. Physiology.
2. Biochemistry
3. Anatomy.
4. Bacteriology.
5. Option one.
6. Option two.

#### 60. FOURTH EXAMINATION

1. Medicine.
2. Surgery.
3. Pathology.
4. Pharmacology.

#### 61. FIFTH EXAMINATION

1. Medicine (including Paediatrics).
2. Surgery.
3. Obstetrics and Gynaecology.
4. Pathological Chemistry.
5. Hygiene and Preventive Medicine.
6. Medical Jurisprudence and Toxicology.
7. Therapeutics.

#### 62. SIXTH EXAMINATION

1. Medicine.
2. Surgery.
3. Obstetrics and Gynaecology.
4. Paediatrics.
5. Clinical Ophthalmology
6. Clinical Oto-Laryngology.
7. Clinical Therapeutics.

NOTE.—Questions in Pathology may be asked on the papers in Medicine, Surgery or Obstetrics and Gynaecology.

Questions on Applied Anatomy may be asked on the papers in Medicine and Surgery in the Fourth, Fifth and Sixth Examinations.

63. Candidates at the Second, Third, Fourth, Fifth and Sixth Examinations who have passed in all but two subjects may present themselves at the Supplemental Examinations next ensuing.

Candidates at the Second, Third, Fourth, Fifth and Sixth Examinations failing in three or more subjects must repeat the entire work of the year, including the examinations in every subject of the year

64. Candidates at the Supplemental Examinations who succeed in passing in the one or the two subjects in which they were conditioned at the Annual Examinations shall be allowed their year.

65. Candidates at the Supplemental Examinations who fail in any subject in which they were conditioned, will be required to repeat the entire work of the year, including the examinations thereof in every subject.

66. Candidates of the First, Second or Third Years who at the Supplemental Examinations fail to pass in one optional subject in which they were conditioned will be permitted to register in the next succeeding year, but will be required to pass the examination in this option at the end of the year, before they will be allowed to proceed with their course.

67. Candidates in the Fourth, Fifth and Sixth Years taking Options must satisfy the Head of the Department concerned that they have done satisfactory work. Reports on the character of their work are to be sent to the Secretary of the Faculty by the Head of the Department

68. In all examinations the quality of English written or spoken by the candidate, especially its lucidity and its fitness to the subject, will carry great weight with the examiner. If a candidate in the first year is reported by the examiners as having used English of a low standard, this report will be considered in determining his standing at the final examinations of that year.

69. It has been the regulation for some years that students be not informed of the marks they have obtained at the Annual or Supplemental Examinations. In future a statement will be sent to all students who have not completely passed in all examinations and to any other students who request the same *in writing*, from the Secretary indicating their approximate standing as follows:—

A—70% to 100%.

B—50% to 69%.

C—40% to 49%.

D—below 40%.

In awarding prizes and fellowships the marks for optional subjects or courses will not be included

## 70. REGULATIONS FOR LICENCE TO PRACTISE

The right to practise Medicine in Canada or its provinces is not conferred when a student receives his degree from the University. There is a licensing body for the Dominion and one for each of the provinces, each of which has formulated certain medical laws and a standard of general education with which the student must comply before he is entitled to practise. One of these requirements is that it is necessary to be registered in the province in which the student intends to practise, five years before he can obtain a license. Students are therefore advised to complete their registration for license to practise in the First or Second Year.

For official information of all matters relative to the regulations for licence to practise in the various Provinces in the Dominion, students should communicate with the Registrar. The following is a list of the names and addresses of the Registrars of the Medical Councils:

For official information regarding the Medical Council of Canada address: Dr. R. W. Powell, 180 Cooper Street, Ottawa, Canada.

Ontario—Dr. H. W. Aldins, 170 University Ave., Toronto.

Quebec—Dr. J. Gauvreau, Dandurand Bldg, St. Catherine St. E., Montreal

New Brunswick—Dr. John S. Bentley, 138 Charlotte St., St. John.

Nova Scotia—Dr. W. H. Hattie, Halifax.

Prince Edward Island—Dr. James Warburton, Kent St., Charlottetown.

Newfoundland—Dr. T. Mitchell, St. John's.

Manitoba—Dr. J. E. Coulter, 604 Boyd Bldg., Winnipeg.

Alberta—Dr. G. R. Johnson, Calgary.

Saskatchewan—Dr. J. MacGregor Young, Regina.

British Columbia—Dr. A. P. Proctor, Vancouver.

## 71. REGULATIONS FOR THE DEGREE OF DOCTOR OF MEDICINE AND MASTER OF SURGERY

The Degrees which the Faculty of Medicine, University of Toronto, offer to Graduate students are those of Doctor of Medicine (M.D.) and Master of Surgery (Ch.M.).

Before a candidate will be eligible to register for these degrees he must have fulfilled the following entrance requirements:

(1) Graduated in Medicine from a recognized University.

(2) Spent one year in a Hospital as an Interne on a rotating service or its equivalent. (Two years general practice may be accepted as the equivalent of this).

*Length of Course:*

The course will be normally of three years duration of twelve months each.

Three years or more in general practice may be accepted as equivalent

to the first of the clinical years of the course. One full year's special work in one of the required laboratory subjects of the course may be accepted as equivalent to the laboratory year of the course. A graduate having the B.Sc. (Med.) will be considered as having fulfilled this requirement. In very exceptional cases, both of the above alternatives may be allowed.

*The Course will consist of:*

*First Year (Clinical).*

One year's instruction in Medicine or Surgery.

This may be taken while the student is acting as a Hospital Interne in the selected clinical subject. (This is in addition to the internship on a rotating service).

At the end of the first year the candidate must present a certificate to the School of Graduate Studies from the Physician or Surgeon in charge of the service in which the candidate has worked, stating the nature and details of the work done, and the degree of efficiency with which it has been carried on.

*Second Year (Laboratory).*

One year's instruction in a laboratory subject.

The student will devote the major part of his time for this year to work in one of the following laboratory departments and the minor part to work in any other two of these departments:

- (a) Anatomy.
- (b) Physiology.
- (c) Biochemistry.
- (d) Pathological Chemistry.
- (e) Pathology.
- (f) Bacteriology and Immunology.
- (g) Pharmacology.
- (h) Physics.

At the end of the second year proceeding to the Degree of M.D., the candidate must pass a written and oral examination in the major and two minor subjects he has elected to take.

At the end of the second year proceeding to the Degree of Ch.M., the candidate must pass a written and oral examination in the following subjects:

- (a) Pathology, including Bacteriology.
- (b) Anatomy.
- (c) Principles of Physiology.

A candidate failing in either the written or oral examination in his major subject must repeat the year before being considered eligible for re-examination. A candidate failing in not more than one of his minor subjects may apply for a Supplemental examination in that subject in which he has failed.

*Third Year (Clinical).*

One year's instruction in Medicine or Surgery.

One of the clinical years in the course for the Surgical Degree may be spent in the Department of Obstetrics and Gynaecology.

This clinical year may be taken while holding a hospital appointment in the selected clinical department.

At the end of the third year proceeding to the Degree of M.D. or Ch.M. the candidate must present a certificate to the School of Graduate Studies from the Physician or Surgeon in charge of the service on which he has worked, stating the nature and details of the work done and the degree of efficiency with which it has been carried out.

The third year of the course must be taken in the University of Toronto in all cases.

Candidates in Medicine or Surgery, besides being familiar with the general field of the subject, must be able to make.

- (a) A satisfactory examination of the Eye, Ear, Nose and Throat.
- (b) A satisfactory pelvic examination.
- (c) A satisfactory routine laboratory examination.

Candidates must present a satisfactory thesis and pass an examination in the subjects of instruction at the end of the course. Candidates proceeding to the Ch.M. must pass an examination in General Surgery.

## SCHOLARSHIPS, MEDALS, PRIZES AND FELLOWSHIPS

### THE GEORGE BROWN MEMORIAL SCHOLARSHIP IN MEDICAL SCIENCE

72. Dr. A. H. F. Barbour, of Edinburgh, having placed one thousand pounds sterling at the disposal of the University of Toronto, for the purpose of founding a Scholarship in Medical Science in memory of the late Hon. George Brown, the following regulations have been adopted with regard thereto—

This scholarship shall be called the George Brown Memorial Scholarship in Medical Science and shall be awarded annually at the Convocation for conferring degrees in Medicine to the Bachelor of Medicine who shall have distinguished himself most in the subjects of Anatomy, Biology, Physiology, Biochemistry, Pharmacology, Pathology and Pathological Chemistry.

The award shall be made by a committee composed of the Professors in these subjects who shall report as to the successful candidates, after having given due attention to the results of the annual examinations, and to the character of the work done by the candidates in the University laboratories.

The holder of the scholarship during the year of tenure is required to engage in original research in any one of the laboratories of the University on some subject bearing on the advancement of medical science—the laboratory providing the material for the investigation.

The scholarship is to be paid in two portions, two-thirds at the time of award and one-third six months later, on the holder giving satisfactory report (to whomsoever the University may appoint) of the work he has already done.

A report of the research, when completed, is to be given to the University.

The value of the scholarship is three hundred dollars (\$300 00).

Awarded in 1922 to R. H. McDonald, M.B.; 1923, L. T. Colvin, M.B.; 1924, Miss E. H. Chant, B.A., M.B

#### THE STARR MEDALS

73 The late Richard Noble Starr, M D, devised certain property for the encouragement of post-graduate study in Anatomy, Physiology and Pathology, and in fulfilment of this object one gold and two silver medals called the "Starr Medals", are awarded annually to three candidates for the degree of M.D., who have shown by the theses which they have presented for that degree, that they have successfully pursued such study in any one of these subjects. The theses for which these medals are given must attain a standard approved of by the Board of Examiners, and the relative value of the theses will determine the rank of the candidates for the medals

#### GEORGE ARMSTRONG PETERS PRIZE

74. This prize will be awarded annually to the student of the University of Toronto who obtains the highest standing in Surgery in the Final Year of the Medical Course.

The value of the Prize is One Hundred Dollars (\$100 00).

The award of this Prize was made possible by the collection of a fund of money from the friends and students of the late George Armstrong Peters for the purpose of perpetuating the memory of his services to the Faculty of Medicine in the Department of Surgery from 1892 to 1907.

Awarded in 1921 to R. I. Harris, M.B.; 1922, F G Banting, M.C., M.D, LL D, Qu D Sc.

## THE REEVE PRIZE

75. A portion of the Reeve Post-Graduate Fund will be devoted to establishing a prize of \$50.00, to be awarded annually for the best published report of work done in the laboratories by a research Fellow or junior member of the staff in any department in Medicine.

The award shall be made in September by a Committee composed of the Professors of Anatomy, Physiology, Biochemistry, Pharmacology, Pathology and Pathological Chemistry

Awarded in 1923 to F. G. Banting, M.C., M.D., LL D, Qu. D Sc, and C. H. Best, M A., 1924, E. C. Noble, M.A.

## THE CHAPPELL PRIZE

76. The late Dr. Walter F Chappell, of New York, a graduate in the Faculty of Medicine of the University of Toronto, established a prize of Fifty Dollars (\$50.00) per annum to be awarded in alternate years to the best student of the final year in Clinical Medicine or Clinical Surgery In June, 1925, the prize will be awarded in Clinical Surgery. This prize is awarded on the recommendation of the Head of the Department.

Awarded in 1923 to D. S. Carlie, M B.; 1924, E. P. Scarlett, B.A, M.B.

## THE JAMES H. RICHARDSON RESEARCH FELLOWSHIP IN ANATOMY

77. This Fellowship of the annual value of Five hundred dollars (\$500.00) has been established in memory of the late Dr. James H. Richardson, for many years Professor of Anatomy in the University of Toronto It is open to graduates in Medicine of the University of Toronto and of such other Universities and Medical Schools as may be approved by the Nominating Committee and to students in the University of Toronto who shall have completed the third year of the course in Medicine.

The fellowship is awarded on the nomination of a Committee consisting of the Professor of Anatomy, the Professor of Biology and the Professor of Surgery in the University of Toronto, and the holder of it is obliged, during its tenure, to devote his entire time to investigation in Anatomy under the direction of the Professor of Anatomy in the University of Toronto. The fellowship is tenable for one year, but the holder of it is eligible for re-appointment for not more than two additional years, at the discretion of the University Senate upon the recommendation of the Nominating Committee.

Applications for nomination to the Fellowship should be handed to the Professor of Anatomy not later than the first day of May of each year.

Awarded in 1919, 1920 and 1921 to H. G. Willson, B.A, M.B, M D, 1922 and 1923, W. C M Scott, B Sc. (Med.).

## ELLEN MICKLE FELLOWSHIP

78. A Fellowship, being the annual income from an endowment of Twenty Five Thousand Dollars (\$25,000) has been established by the late Dr. W. J. Mickle, known as "The Ellen Mickle Fellowship", to be given to the student (or students) who in the examinations at the end of the fifth year of the Six Years' Course in Medicine, shall have taken honours of the first class in at least three fourths of the subjects of that year, and shall have obtained the highest marks in the examinations. The award will be made to the above referred to student (or students) provided he proceed to the degree of Bachelor of Medicine in this University and spend one year in post graduate study approved by the Council of the Faculty of Medicine.

Those students who obtain an average of 70% in all subjects of the year, and not less than 60% in any subject, shall be considered as having obtained Honour Standing.

Awarded in 1921 to J. Hepburn, M.B.; 1922, J. E. Bates, B.A., M.B.; 1923, J. Markowitz, M.B.; 1924, B. I. Johnstone, M.B.

## CHARLES MICKLE FELLOWSHIP

79. This Fellowship, bequeathed by the late Dr. W. J. Mickle, being the annual income from an endowment of Twenty Five Thousand Dollars (\$25,000) will be awarded annually to that member of the medical profession who is considered by the Council of the Faculty of Medicine of the University of Toronto to have done most during the preceding ten years to advance sound knowledge of a practical kind in medical art or science.

Awarded in 1921 to I. P. Pavlov, F.R.S., LL.D. Edn.; 1922, H. Cushing, M.D., S.D., LL.D. Moseley; 1923, F. G. Banting, M.C., M.D., LL.D. Qu., D.Sc.; 1924, Sir James Mackenzie, LL.D., M.D., F.R.S.

## THE J. J. MACKENZIE PRIZE IN PATHOLOGY AND BACTERIOLOGY

80. This prize, consisting of the income from \$5,000, is the generous donation of Graham Campbell, B.A., M.B., C.M., in the memory of the late J. J. Mackenzie, for many years Professor of Pathology and Bacteriology in the University of Toronto. It will be awarded annually to the student, who, at the end of the final year is considered to have done the best work in these subjects during his undergraduate course.

Awarded in 1924 to E. P. Scarlett, B.A., M.B.

## THE ALEXANDER MCPHEDRAN RESEARCH FELLOWSHIP IN CLINICAL MEDICINE

81. In 1913 a number of business men, on request, subscribed through Professor Alexander McPhedran to a fund for the promotion of Clinical and Laboratory work in the Department of Medicine. In 1924 the balance of the fund was transferred by Professor McPhedran to the



Board of Governors for the purpose of founding "The Alexander McPhedran Research Fellowship in Clinical Medicine" of the value of \$1,200 annually. The Fellowship is open to graduates in Medicine of the University of Toronto and of such other Universities and Medical Schools as may be approved of by the Faculty of Medicine. It is tenable for one year but the holder of it is eligible for reappointment. The Fellowship is awarded on the recommendation of the Professor of Medicine to the President, and the holder of it is obliged, during its tenure to devote his whole time to investigations in Clinical Medicine under the direction of the Professor of Medicine.

Applications for nominations to the Fellowship should be forwarded to Professor of Medicine not later than the first day of May of each year.

#### THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIPS

82 Three scholarships, each of the value of \$250, have been established by the Alumni Federation of the University to be awarded to students in the Faculty of Medicine.

The general basis on which the above scholarships may be awarded is as follows.

(a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918.

(b) Standing in course of studies.

(c) Need of assistance

(d) Such other general qualifications of merit as may commend themselves to the Committee.

Information regarding these scholarships may be obtained from the Secretary-Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made.

#### THE UBUKATA FUND

83. The S. Ubukata Fund of \$10,000, the gift of Mr. S. Ubukata, provides for the establishment of prizes, medals, scholarships and loans for which Japanese students of all faculties and colleges may be eligible. Information regarding the conditions of award may be obtained from the Registrar of the University.

#### THE ROBERT BRUCE SCHOLARSHIP

84. The Robert Bruce Scholarship, founded from the Estate of the late Robert Bruce of Quebec, of the value of \$100, is open to undergraduates who have completed the First Year in the Faculty of Medicine, subject to the following conditions:

1. This Scholarship is open only to students (a) who are of Scottish extraction, (b) who have complete Matriculation in this University as at the date of entrance, (c) who without some assistance would be hampered in entering upon a course of study in the University.

2. A student who already holds a Scholarship of the value of at least \$100, exclusive of free tuition, cannot qualify for the above Scholarship.

3. Applications for this Scholarship should be made to the Registrar of the University not later than November 1st.

## COURSES FOR GRADUATES IN MEDICINE

85. The Faculty of Medicine of the University of Toronto recognizes that the practitioners of the Province are anxious to keep closely in touch with the advances in Medicine, and that they have a claim on the Provincial University to aid them in doing so. The Faculty considers this entails on it a duty second only to the instruction of the undergraduate.

At the present time the large amount of undergraduate teaching makes it impossible to offer during the academic session set courses of sufficient variety to meet all the needs of those who seek further study.

Those who have studied abroad know that the routine method is for the graduate to attend the instruction given to the students of the senior years in Medicine, to follow the ward rounds and to go to the out-patient department picking up what he can. The Faculty has opened the courses of instruction given to the higher years in Medicine to any one who cares to attend and refresh his knowledge in this way. A Standing Committee has been appointed whose duty it is to give any graduate interested, advice as to the clinics and lectures which should be taken and to confer with the heads of departments and individual teachers so as to arrange a course in advance for each applicant. Such a course may be modified by the committee if it does not prove suitable.

During each year graduates attend undergraduate courses of this kind.

All the library facilities of the University will be open to any post graduate student under the usual conditions.

The staff fully realizes that every effort must be made to render the visit of each post-graduate student both pleasant and of real value. Instruction may be obtained as outlined above in the following:

Medicine.

Surgery.

Obstetrics and Gynaecology.

Paediatrics.

Otology, Rhinology, Laryngology.

Ophthalmology.

Preventive Medicine.

Pathology and Bacteriology.

The University will impose a minimum fee of \$10 00 per month. This will be imposed for any course of less than a month as a registration fee. In such cases where extended work and attention is required, a special fee to cover the same will be arranged by the committee.

### SPECIAL GRADUATE COURSES

86 The Faculty has during the past years arranged several special graduate courses. A month's course in Paediatrics has been given in July and several short courses in Medicine, Surgery and Obstetrics and Gynaecology, during the vacation months. These courses have been attended by a large number of graduates. The Faculty intends to arrange similar courses each year, but feels prepared at the present time to offer somewhat longer courses of, say, one month, to groups of students who wish instruction in any field of Medicine, if a sufficient number apply for the same. These will be announced from time to time in the bulletin. These courses are intended to be of a practical and useful character, covering a limited field in a thorough manner.

### SHORT COURSES IN RADIOLOGY

87. In order to meet the needs of those graduates in medicine who desire short courses of instruction in Radiology, it has been arranged to provide courses of one month each at the Toronto General Hospital. Classes will be limited and an intensive schedule has been outlined to include.

- (a) Radiographic Technique
- (b) Interpretation.
- (c) Gastro-Intestinal Examination.

In these courses the entire resources of this large clinic will be placed at the disposal of the student in the most practical manner possible.

For full information and terms apply to the Secretary of the Faculty of Medicine, University of Toronto.

### EXTENSION LECTURES

88. By an arrangement with the Ontario Medical Association the Medical Faculty of the University has offered to the profession some 150 lectures on the most important subjects in various fields of medical science. Application for these lectures may be made through the Secretary of the Ontario Medical Association, (from whom a copy of the titles of the lectures may be obtained). Any society or group of physicians may apply for a course of lectures on any subject.

## 89. CURRICULUM FOR THE DIPLOMA OF PUBLIC HEALTH

1 The University provides a Diploma of Public Health (D. P. H.) on the following conditions.—

2. Candidates for the Diploma must be graduates in Medicine of this University or some other University recognized for this purpose by the Senate.

3. The curriculum leading to the Diploma extends over one Winter Session of eight months and one Summer Session of three months.

4. The Winter Session is devoted to:—

*Laboratory Courses and Lectures in :—*

- (a) Bacteriology.
- (b) Sanitary Chemistry.
- (c) Parasitology.

*and, to attendance at—*

- (d) Clinics for Communicable Diseases.
- (e) Psychopathic Clinics.
- (f) Venereal Diseases Clinics.
- (g) Tuberculosis Clinics.
- (h) Well-Baby Clinics.
- (i) Ante-Natal Clinics.

*and, to Lectures or Practical Work in*

- (j) General Hygiene
- (k) Immunology.
- (l) Applied Physiology.
- (m) Sanitary Engineering.
- (n) Public Health Organization and Legislation, and Vital Statistics.
- (o) History of Preventive Medicine and Epidemiology.
- (p) Nutrition and Dietetics.
- (q) Industrial Hygiene.

The Provincial Board of Health of Ontario, the City Health Department of Toronto and the special Clinics at the Toronto General Hospital and the Hospital for Sick Children provide unusual facilities for instruction in the practice of Preventive Medicine.

5. The Summer Session is spent in Field Work in Public Health under the supervision of a recognized Department of Health and includes a study of the methods of dealing with communicable diseases, inspections of schools and other public buildings, factories and dairies, inspections of water supplies and sewage disposal plants; food and meat inspection and other forms of municipal sanitation, and medical inspection of school children.

6. When the required courses of study have been completed, written and practical examinations will be held on the subjects of the curriculum specified in paragraph 4.

7. Candidates who have passed the examinations and who have satisfactorily completed the work specified in paragraph 5 will be granted the Diploma in Public Health.

8. The fee for the course, as outlined in paragraphs 3, 4 and 5, is \$150 00, payable in two instalments of \$75 00 each, at the beginning of the Fall Session, and the Winter Session respectively. The fee for the Diploma is \$20 00.

9. Candidates for the Diploma in Public Health are required to undertake the investigation of an assigned Public Health problem, complete the same and submit the results in the form of a report before being permitted to proceed to the examinations leading to the Diploma.

10. Graduates in Medicine, who for a period of two years have been engaged in full-time Public Health work, may, under the following conditions, take the examination specified in paragraph 6, when they have completed the courses required in paragraph 4.

The work required in the curriculum may be extended over a period of more than one academic year, and the examinations taken when all courses of study have been completed. A yearly fee of \$75.00 payable at the beginning of the Fall Term, must be paid by candidates taking more than one year to complete the required courses. (If only one year is taken to complete the work the fee is \$150.00).

11. Candidates who present satisfactory evidence of having completed work, the equivalent of that required in certain of the courses specified in paragraphs 4 and 5, may petition to be granted exemption from attendance on such courses. This will apply only in the cases of candidates who have been for at least two years engaged in full-time Public Health work, and who at the time of registration are so engaged.

12. The examination of those qualifying under clause 10 will be held in May and September, for others, in September only.

## 90 CURRICULUM FOR THE DIPLOMA OF RADIOLOGY

The Faculty of Medicine, University of Toronto, has instituted a graduate course leading to a Diploma in Radiology.

Candidates for the Diploma are required to

- (a) Be graduates in Medicine of this University or some other University recognized for this purpose by the Senate.
- (b) Have spent at least one year after graduation as an interne in a recognized hospital.

The Curriculum leading to the Diploma extends over one Winter session of eight months.

*The session will be devoted to courses in:*

## PHYSICS

The instruction in Physics will consist of three courses of lectures accompanied by practical work in illustrative experiments.

The lecture courses are as follows.

1. *Radiation.*

In this course of lectures there will be discussed:

- (a) The origin of radiations, (b) the properties of various types of radiation, including infra red, ultra violet and visible rays, (c) absorption of radiations; (d) fluorescence and phosphorescence.

2. *Electricity, Magnetism and Roentgen Radiology.*

This course of lectures will consist in the treatment of (a) the fundamental idea of charge electricity, difference of potential, electromotive force, capacity, current and inductance; (b) the effects of electrical currents with particular attention paid to electromagnetism and the application of the latter in various measuring instruments; (c) detailed study of the principles underlying motors, dynamos, and other instruments used in X-ray technique; (d) the properties of electrons—the production of X-rays, and the properties and quantitative measurements of these rays

3. *Radioactivity.*

This course of lectures will consist of the (a) isolation of radioactive substances; (b) radiations (L.B. and X-rays) emitted by radioactive substances and quantitative measurements of these three types of rays; (c) properties of radioactive emanations from radium, thorium and actinium; (d) radioactive transmutations generally with applications to selected problems.

## RADIOLOGY

(1) *Anatomy.*

A detailed study in normal Anatomy from a Radiological aspect in infancy, adult life and old age. The epiphyses' appearance of the skeleton from various angles together with many abnormalities which do not constitute pathological processes, the changes which normally occur in bones and joints with advancing age and in old age. The normal anatomy of the thoracic and abdominal viscera, etc.

(2) *Pathology.*

A course in co-operation with the Department of Pathology in which a special study will be made of the pathology of all diseases which come within the range of X-ray and Radium methods either in diagnosis or treatment. In the latter a study will also be made of the histological changes brought about by X-ray or radium applications to various tissues.

(3) *Technique.*

A complete course in the technique of Radiography. Ample facilities are provided for the student to personally carry out all procedures and to perfect himself in this side of the work. In the later part of his course he will be expected to take entire charge of one of the operating rooms.

(4) *X-ray Interpretation.*

In addition to the daily routine of plate interpretation there is now a classified library of several thousand plates including nearly all the unusual and interesting cases to be met with and these will be studied systematically. There is also an almost unlimited collection of other plates which are available for study

(5) *X-ray Therapy.*

A complete course in Therapy is provided. This will include all aspects of this work from the superficial to the intensive use of voltages up to 250,000 together with the methods of measurement and calculation of all dosages. The material available for this study is very large and diversified.

(6) *Radium.*

A course in Radium Therapy which for the present is limited to the use of Radium element.

(7) *Short Courses in Medicine and Surgery.*

As in Pathology, so in Medicine, Surgery and Gynaecology, courses will be arranged in collaboration with those Departments for Systematic

lectures and study of the various diseases or conditions under consideration in order that the student may be presented with the entire problem in its broader aspect.

Examinations on the subjects of the curriculum will be held at the end of the session.

Candidates who have passed the examinations and who present certificates of having satisfactorily completed the work specified will be granted the Diploma in Radiology.



## COURSES OF INSTRUCTION

## CHEMISTRY

*Professor of Organic Chemistry and Secretary of the Department of Chemistry:*  
F. B. ALLAN.

*Professor:* F. B. KENRICK

*Professor of Physical Chemistry:* W. LASH MILLER.

*Associate Professor:* J. B. FERGUSON.

*Associate Professor of Electrochemistry:* J. T. BURT-GERRANS

*Assistant Professors:* W. S. FUNNELL, W. H. MARTIN.

*Assistant Professor of Analytical Chemistry:* L. J. ROGERS.

*Assistants:* MISS E. V. EASTCOTT, J. CRYER, J. D. GARRARD, A. R. GORDON, H. R. HUGILL, C. M. JEPHCOTT, O. C. H. KITCHING, C. A. MORRELL, H. SIMS, E. M. SPARLING, R. B. WALKER.

All lectures and practical work will be given in the Chemistry Building.

## FIRST YEAR

*Lectures.*—Students attend a course of experimental lectures delivered twice a week in the lecture theatre. This course embraces the study of the non-metallic and metallic elements and their principal compounds based on Mendelejeff's classification of the elements.

*Practical Chemistry.*—The laboratory work commences with quantitative and qualitative experiments illustrating the fundamental principles of chemistry; this is followed by work more intimately related to analytical chemistry. Instruction in quantitative methods of analysis is given.

## SECOND YEAR

*Lectures.*—A course of lectures on the systematic classification of organic compounds and on elementary physical chemistry, twice a week.

*Practical Chemistry.*—A special laboratory course to accompany the above lecture course will be given during the Easter Term.

*Option*—This is a course in volumetric analysis.

Students working in the laboratory are provided with the necessary apparatus on making a deposit of four dollars at the commencement of the session, which will be returned at its close after the following charges have been deducted from it—

- (1) The cost of all apparatus broken or destroyed.
- (2) Any fines for breach of laboratory rules.

No certificate will be given for the practical work unless the student has passed the practical examinations conducted during the session.

*Text-books*.—Smith's General Chemistry, Kendall, Organic Chemistry, Norris, Physical Chemistry for Physicians and Biologists, Cohen and Fischer; An Elementary Laboratory Course in Chemistry, Kenrick and DeLury.

*Books of reference recommended*.—Inorganic Chemistry, Richter; Organic Chemistry, Richter.

## PHYSICS

*Professor and Director of the Physical Laboratory*: J. C. McLENNAN.

*Professor*: E. F. BURTON.

*Associate Professors*: JOHN SATTERLY, LACHLAN GILCHRIST,  
H. A. McTAGGART.

*Demonstrators*: COLIN BARNES, MISS K. M. CROSSLEY, MISS F. M.  
QUINLAN, A. G. SHENSTONE

*Assistant Demonstrators*: MISS M. C. W. BUFFAM, MISS L. CROW, MISS  
B. M. REID.

*Class Assistants*: MISS R. CARNAHAN, MISS E. COHEN, M. S. LIGGETT,  
L. M. MCKENZIE

*Secretarial Assistant*: MISS A. T. REED

The work of instruction on Physics consists of a series of lectures and a course in practical work in the laboratories.

### FIRST YEAR

*Lectures*.—The lectures on Physics will not only give a concise outline of the subject, but are intended to form a satisfactory foundation for future study in other branches of science.

A course of lectures on Practical Mathematics and Mechanics will be given 2 hours a week during the whole year. These lectures, which will be illustrated by many problems, will deal in a systematic way with mechanics, use of curves, logarithms, etc.

There will be three lectures in Physics per week during the year; one lecture each week bears directly on the practical work assigned to the student, while the other two lectures each week are part of a course dealing more particularly with the principles of Physics of special use to students of Medicine. The following is an outline of the work covered:

# 1. APPLIED MATHEMATICS AND CALCULATIONS. THEORY OF MEASUREMENTS.

Calculations of experimental results to show limits of accuracy: contracted methods, logarithms.

Trigonometrical ratios defined, and simple relations deduced; reading of tables of sines, cosines and tangents.

Graphical methods, equations to straight line and parabola; logarithmic curves; deduction of simple formulae from graphs, slope of curves from graphs.

Simple ideas involved in the calculus; illustration of velocity of a falling body from  $s = \frac{1}{2} gt^2$ .

Statistical Methods. Deviation, Dispersion, the Frequency Curve, Probable Error, Correlation, introduction to Biometrics.

# 2. MECHANICS.

Measuring instruments, length, volume; verniers, micrometers.

Forces; conditions of equilibrium; resolution of forces, moments, centre of gravity; levers and simple machines.

Velocity; acceleration, momentum, force, work and power, absolute and practical units in English and metric systems; mass and weight; value of 'g'.

Energy, kinetic and potential; transmutation of energy; law of conservation of energy.

Simple harmonic motion; the pendulum; combination of two motions perpendicular to each other; Lissajous figures, Blackburn's pendulum.

# . HYDROSTATICS AND HYDROMECHANICS.

Laws of pressure in fluids at rest; Pascal's Law and Archimedes' principle; specific gravity; the hydrostatic paradox; resultant vertical forces on walls, manometers, barometers, mercury and aneroid; Bramah's press; pumps.

Archimedes' principle in air; weight of atmosphere.

Laws of pressure in fluids in motion; Bernoulli's principle; applications such as atomizer, Bunsen burner, filter pump, action of air in winds and curving of balls in flight.

# 4. PROPERTIES OF MATTER.

Principles of the kinetic theory of matter; structure of solids, liquids and gases; diffusion; molecules and molecular forces.

Elastic properties of solids; bulk modulus, torsion modulus or rigidity, Young's modulus; micro-photographic study of metals; crystallization.

Viscosity of fluids, velocity gradient; coefficient of viscosity; Poiseuille's law for tubes; experimental determination of coefficient; Ostwald viscosimeter; viscosity and temperature; relation to blood flow; capillaries.

Surface tension, experimental illustrations, definition of coefficient and determination of same; energy of surface; shapes of free surfaces

Laws of gases; theoretical determination of pressure,  $p = 1/3 mnV^2$ ; Boyle's Law; Charles' Law; laws of diffusion.

Change of state; solid to liquid, liquid to gas; vapour pressure, with measurement; relation to temperature; vapour density; liquefaction of gases, critical temperature and pressure, low temperatures.

Colloidal solutions, size of particles; physical properties; mobility; coagulation by electrolytes; Brownian movement and its molecular explanation; confirmation of the kinetic theory; dialysis; relation to body fluids and membranes.

## 5. HEAT.

Expansion of solids, liquids and gases; thermometers; Centigrade and Fahrenheit scales; absolute scale; maximum and minimum thermometers; clinical thermometer.

Capacity for heat; calorie; specific heats; latent heat of vaporization and fusion; calorimetry.

Heat as energy; mechanical equivalent of heat; Joule's law.

Vapour pressure; vapour density; dew point; various forms of hygrometers; relative humidity.

Radiation; laws of cooling, wave length of heat radiations, transmission of energy through space. Conduction

## 6. ACOUSTICS.

Production, propagation and recording of sounds; characteristics of a note, pitch, intensity and quality; definition of wave length; determination of velocity;  $V = n\lambda$ ; resonance; stationary waves; organ pipes; laws of strings; membranes; voice production, structure of ear, interference of sound waves; beats and beat tones, absorption and reflection of sound, musical scales.

## 7. ELECTRICITY AND MAGNETISM.

The fundamental phenomena associated with electrified bodies and the laws of the action of electrical charges. The methods of measurement of electrical charge, current, potential, capacity, resistance, conductance and the definition of the units of these quantities in the electrostatic, practical and electromagnetic systems.

The construction and action of the instruments used in measuring electrical quantities and the methods of calibrating them. These instruments include galvanometers, ammeters, voltmeters, electrometers, potentiometers and wattmeters.

The properties of liquid conductors, and the measurement of their conductivity. Faraday's laws of electrolysis and the method of determination of the electro-chemical equivalent.

The properties and laws of action of magnets and of the magnetic fields associated with a circuit bearing a current, the method of measuring magnetic mass and magnetic field intensity and the definition of the units of these quantities

The method of production, the properties and the measurement of induced currents of varying frequencies and their application.

The discharge of electricity through gases, and the factors upon which their conductivity depends, the properties and uses of anode, cathode and X rays.

The methods of investigating and identifying radioactive substances. The properties of radioactive radiations and their uses.

## 8. LIGHT.

The electron as a source of light waves—nature of the waves—their velocity in free space, water and glass—their reception by the eye. Analogies in sound and wireless signalling.

Reflection of waves from plane and spherical mirrors—focal lengths of spherical mirrors—images—optical diagrams.

Refraction of waves at a plane surface—index of refraction—the critical angle—methods of finding the index. Refraction of waves at a spherical surface—foci and focal lengths—the diopetre—power of a lens—images—optical diagrams.

*The eye.*—Diagram of the eye—accommodation—the normal, myopic and hypermetropic eye—the far point—lens necessary to correct myopia and hypermetropia—astigmatism.

*Optical instruments.*—The reading lens, compound microscope, telescope, prism binoculars.

*Colour*—Variation of refractive index with colour—deviation of light by a prism—dispersion—kinds of optical glass manufactured—achromatic pair of prisms—direct vision spectroscopy—colour blindness.

*Spectroscopy.*—Emission spectra of solids, liquids and vapours or gases—spectrum analysis—absorption spectra—range of ether waves from infra red to ultra violet waves and X-ray waves.

*Polarised light.*—Polarisation by reflection, by refraction, by natural crystals—the nicol prism—rotation of the plane of polarisation, the polarimeter.

*Interference.*—Interference of waves—colours in thin films.

# 9. PRACTICAL WORK.

The Practical Work, consisting of a laboratory course of four hours each week designed to illustrate the principles dealt with in the lectures, will be conducted under the supervision of the Director of the Laboratory.

*Text-books:* Merchant and Chant, "Mechanics for the Upper School" (Copp Clark); Stewart and Satterly, "Senior Heat" (Univ. Tutorial Press); Duncan and Starling, "Light and Sound" (Macmillan & Co.); S. G. Starling, "Elementary Electricity" (Longmans, Green & Co.) Tuttle and Satterly, "Theory of Measurements" (Longmans, Green & Co.).

## OPTIONAL COURSES IN PHYSICS

In accordance with the plan outlined by the faculty optional courses in Physics are offered in years succeeding the first, as follows:

### SECOND YEAR

*Advanced Electricity and Magnetism*.....PROFESSOR BURTON.

This course of 60 hours is designed to follow on the work in electricity of the first year course. Special emphasis is laid on conduction through liquids and allied phenomena.

### THIRD YEAR

*Colloidal Solutions and Ionisation and Electrical Conductivity of Gases.*

I. *Colloidal Solutions*..... PROFESSOR BURTON

A course of thirty hours lectures and demonstrations on the preparation of colloidal solutions and the study of their properties.

II. *Ionisation and Electrical Conductivity of Gases*. PROFESSOR GILCHRIST

A course of thirty hours lectures and demonstrations.

### FOURTH YEAR

*Acoustics and Optics.*

I. *Acoustics*..... ..PROFESSOR BURTON

A course of thirty hours lectures and demonstrations in advanced acoustics.

II. *Optics* ..... ..PROFESSOR McTAGGART

A course of thirty hours lectures and practical demonstrations on advanced optics.

## FIFTH YEAR

*Radiation and Radioactivity.* . . . PROFESSOR McLENNAN and  
PROFESSOR SATTERLY

A course of sixty hours on radiations and their properties followed by practical work.

## SIXTH YEAR

*Radiology* . . . . . PROFESSOR McLENNAN and  
PROFESSOR GILCHRIST

A course of sixty hours lecture and laboratory work on Radiology.

REGULATIONS.—Deposit Fee: Each student taking the laboratory course is required to make a deposit of three dollars (\$3.00) before beginning work. All supplies, apparatus broken or destroyed and all fines will be charged against this deposit, which must be renewed when exhausted. At the close of the session cash balances will be returned on a day appointed for the purpose.

## BIOLOGY

*Professor of Zoology:* B. A. BENSLEY.

*Professor of Histology and Embryology:* W. H. PIERSOL.

*Associate Professor of Biology:* E. M. WALKER

*Assistant Professor in Vertebrate Embryology:* A. F. COVENTRY.

*Assistant Professor in Experimental Biology and Genetics:* J. W. MAC-  
ARTHUR.

*Assistant Professor in Mammalian Anatomy.* W. H. T. BAILLIE.

*Lecturer in Comparative Anatomy and Neurology:* E. H. CRAIGIE

*Class Assistants:* G. C. BROWN, F. B. WILSON, A. E. McCULLOCH, A. K.  
COLLEY, L. R. ANGUS, H. HETHERINGTON, M. I. SPARES, J. N.  
BIRD, J. L. HART.

*Secretarial Assistant:* Miss E. M. MASON

## FIRST YEAR

*Lectures.*—1. Students of the First Year will attend a course of ninety lectures to be given three times a week during the session. The lectures will serve as an introduction to the biological fields in relation to medicine. The topics include (1) the general nature of living organisms and of cell processes, (2) the types of lower organisms of interest to students of Medicine, (3) an introduction to the anatomy and development of the mammalian organ systems, and (4) biological principles as applied to man.

*Practical Work.*—2. A course of one hundred and eighty hours, comprising two three-hour periods per week, the materials of which are based as far as possible on Lecture course I. The work comprises microscope practice, elementary experimental studies on the nature of cell processes, types of lower organisms, and a selected list of vertebrates, including the elements of mammalian anatomy.

## SECOND YEAR

1. *Option*.—A course on the principles of evolution, heredity and eugenics in relation to medical and sociological problems.

## THIRD YEAR

1. *Option*.—A course of seventy-five hours laboratory work on embryology, including technique, with special reference to the problems of mammalian embryology.

2. *Option*.—A course of seventy-five hours laboratory work on advanced histology and cytology, including technique.

3. *Option*.—A course of lectures and laboratory work on the structure and life history of animal parasites, particularly those which infest man.

4. *Option*.—A co-operative course of lectures and conferences dealing with current biological literature and problems.

5. *Option*.—A course of lectures and laboratory work on the structure and development of the vertebrate nervous system.

*Text-books:* Biology: O'Donoghue, Shull, Borradaile, McFarland, Bigelow, Parker.

Embryology: McMurrich, Manual of Embryology; Bailey and Miller; Prentiss and Arey.

Mammalian Anatomy: Bensley, Practical Anatomy of the Rabbit.

Histology: Jordan, Text-book of Histology, Schäfer, Text-book of Microscopic Anatomy (Quain's Anatomy, 11th edition; vol. II, pt. 1); Lee. Microtometist's Vade Mecum, 8th ed.; Sharp, Introduction to Cytology,

Parasitology: Chandler, Animal Parasites and Human Disease.

Heredity: Morgan, The Physical Basis of Heredity.

For special reading students may consult the printed reading list of the Department of Biology.

## RELATION OF SCIENCE TO CIVILIZATION

## FIRST YEAR

*Lectures*.—The greater part of the assigned time of 60 hours will be devoted to a course of lectures designed to illustrate the influence which scientific thought and achievement have had on the development of modern civilization. The lectures will be given jointly by several lecturers, but the course as a whole will be under the general direction of Professor Wasteneys.



## ENGLISH EXPRESSION

*Instructors: E. L. DANIELL, J. F. VANEVRY*

## FIRST YEAR

*Tutorial Classes*—In this course instruction will be given in the correct use of written and spoken English, and opportunity will be afforded each student to acquire experience in public speaking.

In order that the instruction may be as thorough as possible, the class will be divided into several groups, each of which will meet once a week.

## PHYSIOLOGY (INCLUDING GENERAL PHYSIOLOGY)

*Professor of Physiology:* J. J. R. MACLEOD.*Associate Professor of Physiology:* J. M. D. OLMSTED.*Assistant Professor:* N. B. TAYLOR.*Demonstrators:* M. J. WILSON, F. N. ALLAN.*Fellow:* A. C. TAYLOR.*Part-time Fellows:* J. HEPBURN, W. P. WARNER, H. D. LOGAN, R. S. LANG,  
N. A. MCCORMICK, E. C. NOBLE.*Librarian:* MISS M. GRANGE.*Secretarial Assistant:* MISS M. E. ARMOUR.

The following courses of instruction each extending throughout the session are offered.

1. Systematic lectures; three a week during term:
  - a. General and neuro-muscular physiology.
  - b. Physiology of circulation, respiration, digestion and secretion.
  - c. Metabolism, the functions of the ductless glands and reproduction.
  - d. Physiology of the central nervous system and special senses.
2. Lectures in General Physiology.
3. Advanced lectures; two a week (optional).
4. General laboratory courses (total of 180 hours).
  - a. Neuromuscular Physiology (second year).
  - b. Circulation, respiration and digestion (second and third years).
  - c. Nervous system and special senses (third year).
  - d. Reviews and Conferences.
5. Laboratory course in General Physiology
6. Advanced laboratory courses (optional).
7. Research in Physiology.
8. Journal Club; one hour a week.
9. Optional course Laboratory work in selected parts of subject (available to students of the third and subsequent years in the Medical faculty).
10. History of Physiology. A course of lectures supplemented by discussions towards which the students contribute.

Every student must attain a certain standard in the laboratory exercises before he will be allowed to proceed to the University examinations in Physiology.

Throughout the Session oral and, as may be necessary, written examinations will be held to ascertain the extent of the student's knowledge of Physiology, and the results of these, as well as his general work in the laboratory will be used to determine his position in the University Class Lists.

In the laboratory courses the students will be required to make good all loss through breakage or otherwise.

*Text-books*.—Manual of Physiology, G. N. Stewart; Physiology and Biochemistry in Modern Medicine, J. J. R. Macleod, Starling's or Howell's Physiologies; Bayliss' General Physiology; Luciani's Physiology; Roaf's Physiology, Monographs in Physiology (edited by B. H. Starling). *Works of Reference*.—Other works important for consultation are Marshall's Physiology of Reproduction, Schäfer's Endocrine Organs; Text-Book of Physiology (edited by E. A. Schäfer); Recent and Further Advances in Physiology (edited by Leonard Hill); C. S. Sherrington, Mammalian Physiology.

Students are urged to become members of the Students' Medical Library from which they may borrow, for home reading, books and monographs bearing on the subject of Physiology.

## BIOCHEMISTRY

*Professor of Biochemistry*: ANDREW HUNTER.

*Associate Professor of Biochemistry*: HARDOLPH WASTENEYS.

*Associate Professor of Zymology*: H. B. SPEARMAN.

*Demonstrators in Biochemistry*: MISS J. MCFARLANE, G. S. EADIE.

*Fellows*. J. A. DAUPHINKE, W. F. GEDDES, J. W. SHIER, H. A.

MACKECHNIE, A. M. GOULDING.

*Research Assistant*: H. BORSOOK.

*Secretarial Assistant*: MISS M. DELAMERE.

The following are the Courses of Instruction in this department for students of Medicine.

### SECOND YEAR

*Laboratory*.—An introductory laboratory course in Biochemistry, three hours weekly for the last ten weeks.

### THIRD YEAR

*Lectures*.—A course of lectures—three a week—covering in an elementary way the general field of Biochemistry.

*Laboratory*.—A laboratory course in Biochemistry, six hours weekly in the Michaelmas term.

*Tutorial*.—One hour weekly, reviewing and supplementing in the main the work of the laboratory.

### FOURTH, FIFTH AND SIXTH YEARS

*Optional*.—A laboratory and lecture course, of two to five hours a week, dealing with one or more of the following topics: (1) the principles of nutrition; (2) hydrogen ion concentration and its importance in biology; (3) the action and properties of enzymes.

Every student must attain a certain standard in the laboratory exercises before he will be allowed to proceed to the University examinations in Biochemistry.

Throughout the Session oral and, as may be necessary, written examinations will be held to ascertain the extent of the student's knowledge of Biochemistry and the results of these as well as his general work in the laboratory, will be used to determine his position in the University Class Lists.

In the laboratory courses the students will be required to make good all loss through breakage or otherwise.

*Text-Books and Works of Reference:*

(a) *Elementary or General*:—Hammarsten, Text-book of Physiological Chemistry; Abderhalden-Hall, Text-book of Physiological Chemistry; Mathews, Text-book of Physiological Chemistry; Robertson, Principles of Biochemistry.

(b) *Advanced or Special*:—Monographs on Biochemistry, edited by Plimmer and Hopkins; Robertson, Physical Chemistry of the Proteins; Taylor, Digestion and Metabolism; Lusk, Science of Nutrition; Effront, Biochemical Catalysts in Life and Industry; Euler, General Chemistry of the Enzymes; Abderhalden, Biochemisches Handlexikon; Neuberg, Der Harn.

*Laboratory Handbooks:*

(a) *Elementary*:—Plimmer, Practical Organic and Biochemistry; Hawk, Practical Physiological Chemistry; Folin, Laboratory Manual of Biological Chemistry; Halliburton, Essentials of Chemical Physiology; Cole, Practical Physiological Chemistry, Rockwood's Laboratory Manual of Physiological Chemistry.

(b) *Advanced*:—Abderhalden, Handbuch der biochemischen Arbeitsmethoden; Ellinger, Analyse des Harns.

## ANATOMY

*Professor and Director of the Anatomical Department:* J. PLAYFAIR  
McMURRICH.

*Professor of Histology, Embryology and Anatomy.* W. H. PIERSOL.

*Associate Professor in Anatomy.* J. C. WATT

*Assistant Professor of Anatomy and Neurology:* E. A. LINELL.

*Senior Demonstrators in Anatomy:* H. A. CATES, H. G. WILLSON.

*Demonstrators in Anatomy:* A. S. LAWSON, E. E. SHOULDICE, W. A. COSTAIN, E. A. McCULLOCH, H. G. ARMSTRONG, G. J. GILLAM, A. R. HAGERMAN, W. E. L. SPARKS, H. A. SKINNER, B. L. GUYATT, R. FARQUHARSON.

*Demonstrators in Histology and Embryology:* H. G. ARMSTRONG, H. D. BALL, J. M. MACDONALD, A. G. MCPHEDRAN, H. H. MACKAY, O. C. J. WITTHROW, S. J. EVELYN, P. M. BAYNE.

*Research Assistants:* MARY I. TOM, W. C. M. SCOTT.

*Museum Preparator*—B. L. GUYATT.

*Secretarial Assistant:* MISS G. H. DOWSLEY.

## REQUIRED COURSES

## SECOND YEAR

Course 1. *Gross Anatomy.*—During the Second Year each student is obliged to dissect thoroughly various regions of the body, following the plan outlined in a "Guide to the Dissection of the Human Body". Members of the staff will be in attendance each day for the purpose of superintending the work and of giving instruction, and will hold frequent examinations with the object of testing the student's progress. Certificates of credit in Practical Anatomy will be granted only to those students whose work has been completed to the satisfaction of the instructors in charge.

The Laboratory will be open from 9 a. m. every week-day through the session, with the exception of Saturdays when it will be closed at 12 noon.

In connection with the laboratory work lectures will be given by members of the staff, reviewing the work that has been completed. The object of these lectures will be to supplement the work in the Laboratory by calling attention to the relations and significance of the parts that have been studied and by elucidating with the aid of diagrams and models the anatomy of difficult and important structures.

Course 2. *Histology and Embryology.*—During the Second Year a course of sixty lectures and two hundred hours laboratory work is given on the development of the body and its tissues, and on the microscopic anatomy of its organs.

## THIRD YEAR

Course 3. *Neurology*.—During the Michaelmas Term of the Third Year a course of lectures will be given on the Anatomy of the Central Nervous System.

In connection with the above course of lectures the class will be divided into small sections, to each of which a Demonstrator will be assigned, for the purpose of a practical study of the Anatomy of the Brain.

Course 4. *Gross Anatomy*.—Throughout the whole Third Year dissection will be carried on in order to complete the study of those regions which were not dissected during the Second Year. During the Easter Term of the Third Year a course of lectures will be given dealing with the anatomy of special regions or organs. This course is intended to be supplemental to Course 1, attention being given to the practical applications of the structure and regional anatomy of the parts considered.

## OPTIONAL COURSES

These courses are designed for those students who may desire a more intensive study of certain systems or organs than is afforded by the required course. They are open to those who have completed the second, or in some cases, the third year of the Medical Course. All the courses listed will not be offered in any one year, but selections will be made from them according to the demand and to the facilities of the Laboratory. The time required for each course will be the equivalent of two hours per week throughout the year.

Course 5. *General Gross Anatomy*.—This course is designed to give opportunity for a review of the Gross Anatomy of the Human Body. It is based largely on the study of sections and is open to students who have completed the *second* year of the Medical Course.

Course 6. *Embryology*.—A course of seventy-five hours laboratory work (including technique) with special reference to the problems of mammalian and human embryology. Open to students who have completed the *second* year of the Medical Course.

Course 7. *Cytology*.—A course of seventy-five hours laboratory work on advanced vertebrate histology and cytology, including technique. Open to students who have completed the *second* year of the Medical Course.

Course 8. *Anatomy of the Joints*.—A study of the anatomy and actions of the joints, with especial reference to the anatomy of dislocations. Open to students who have completed the *second* year of the Medical Course.

Course 9. *Anatomy of the Digestive System*.—This course will include an intensive study of the development, minute structure and gross anatomy of the organs of the digestive system. The complete course will extend throughout two years, but either portion of it may be elected. Open to students who have completed the *second* year of the medical course.

Course 10. *Anatomy of the Genito-Urinary Organs*.—An intensive study of the development, minute structure and gross anatomy of the Urinary and Genital organs. Open to those who have completed the *second* year of the Medical Course.

Course 11. *The Anatomy of the Sense Organs*.—Intended especially for those who intend to specialize in Ophthalmology and Oto-laryngology. Open to students who have completed the *third* year of the Medical Course.

Course 12. *Anatomy of the Lymphatic System*.—A study of the development, structure and distribution of the Lymphatic organs and with special attention to their medical and surgical significance. Open to students who have completed the *fourth* year of the Medical Course.

Course 13. *Research Course*.—Opportunities will be afforded properly qualified students for carrying on investigation in anatomical problems. Arrangements for this Course must be made with the Professor of Anatomy.

Courses 9, 10 and 12 will not be available during the session 1925-1926.

*Text-books*:—Piersol; Gray; Morris; Cunningham's Text-book; Guide to the Dissection of the Human Body for the use of Students in the Anatomical Laboratory of the University of Toronto; Jordan, Text-book of Histology; Piersol, Normal Histology; Bailey, Text-book of Histology; McMurrich's Development of the Human Body; Bailey and Miller, Text-book of Embryology; Prentiss and Arey, Text-book of Embryology; Ranson, Anatomy of the Nervous System.

*Reference Text-books*:—Spalteholz, Hand-Atlas of Human Anatomy; Toldt's Atlas of Human Anatomy; Sobotta's Atlas and Text-book of Human Anatomy; Eycleshymer and Shoemaker, Cross-Section Anatomy; Quain's Anatomy; Barker's The Nervous System; Johnston, Nervous System of Vertebrates; Villiger, Brain and Spinal Cord; Herrick, Introduction to Neurology; Tilney and Rilev, The Form and Functions of the Nervous System; Von Bardeleben's Handbuch der Anatomie; Rawlings, Landmarks; Treves, Applied Anatomy; Davis, Applied Anatomy; Beesley and Johnston, Surgical Anatomy, Whitnall, Anatomy of the Human Orbit; Schaffer, Anatomy of the Nose; Schafer, Microscopic Anatomy (in Quain's Anatomy, 11th edition, Vol. 11, Part 1); Keibel and Mall, Human Embryology; Lee, Microtome's Vade mecum, 8th edition.

## PHARMACY AND PHARMACOLOGY; MATERIA MEDICA

*Professor:* V. E. HENDERSON.

*Demonstrator in Pharmacy:* L. J. BONHAM.

*Fellow:* R. W. GRAHAM.

*Class Assistants in Pharmacy:* J. A. MACDONALD, J. C. HALLAMORE,  
K. MULDOON.

*Class Assistant in Pharmacology:* N. C. SHARPE.

*Secretarial Assistant:* MISS D. MANNING.

## THIRD YEAR

Two courses of laboratory work accompanied by lectures and laboratory talks are given.

*Practical Work.*—LABORATORY COURSE I. Experimental pharmacology. In this course the student obtains an opportunity to become familiar with representatives of the drug-stuffs composing the various pharmacological groups. The chief object of the course is to get the student into the habit of accurate observation of the effects produced by drugs and to be able to describe them in accurate pharmacological language. In consequence a great deal of attention is given to the note books kept by each student. The course is accompanied by many mammalian demonstrations. The tracings of all demonstrations are analysed by each student.

LABORATORY COURSE II. Practical Pharmacy. This course is very brief, consisting only of a few hours' work on the chemical and physical incompatibles and in dispensing several mixtures, pills and ointments, in order that the student may obtain such insight into dispensing as is necessary to enable him to write prescriptions intelligently.

Total of these two courses, 90 hours.

Arrangements have also been made with the Toronto General Hospital, the Hospital for Sick Children and the Western Hospital, by which the students of this year will be drafted in turn to act as Assistants in the Hospital Dispensaries for a period of a week.

*Lectures.*—A course of lectures on general pharmacology (35 in all). This course is designed to supplement and extend the knowledge gained in the laboratory and from the prescribed text-book.

*Prescription Writing.*—Each student is expected to hand in answers to the problems in prescription writing announced each week. These are corrected and returned, and opportunity is given for the discussion of any difficulties, with the staff during laboratory hours. Informal talks are also given from time to time as needed.

*Text-books.*—Pharmacy and Materia Medica, Henderson; Pharmacology, Dixon, Applied Pharmacology, A. J. Clark.

*Reference Text-books.*—Pharmacology, Cushny, Gotthet and Meyer, Sollmann, Bastedo; Prescription Writing.—Bennett, Medical and Pharmaceutical Latin; Eggleston, Prescription Writing; Materia Medica and Prescription Writing, Bethea.



## TOXICOLOGY

*Professor of Pharmacology:* V. E. HENDERSON.

A course of ten lectures is given dealing with the pathology, pharmacology, symptomology and treatment of the more important poisons which are commonly the cause of either forensic or industrial cases of poisoning

## MEDICINE

*Emeritus Professor of Medicine:* ALEXANDER MCPHEDRAN.

*Professor of Medicine:* DUNCAN GRAHAM.

*Associate Professor of Medicine:* WILLIAM GOLDIE.

*Assistant Professors of Medicine:* F. A. CLARKSON, G. HOWLAND (in charge of Neurology), J. OILLE, D. KING SMITH (in charge of Dermatology)

*Associates in Medicine:* J. H. ELLIOTT, J. D. LOUDON, H. C. PARSONS, G. S. STRATHY, G. S. YOUNG.

*Sensor Demonstrators in Medicine:* R. G. ARMOUR, G. F. BOYER, W. R. CAMPBELL, A. H. W. CAULFEILD, E. E. CLEAVER, H. K. DETWEILER, A. A. FLETCHER, N. B. GWYN, B. HANNAH, H. S. HUTCHISON, R. A. JAMIESON, A. J. MACKENZIE, A. G. MCPHEDRAN, J. H. MCPHEDRAN, W. F. MCPHEDRAN, L. MURRAY, W. E. OGDEN, T. J. PAGE, F. W. ROLPH, CHAS. SHEARD, Jr., E. J. TROW.

*Junior Demonstrators in Medicine:* G. BATES, E. A. BROUGHTON, H. A. DIXON, J. HEPBURN, F. S. PARK

*Fellow* R. S. LANG.

*Clinical Microscopy* { *Sensor Demonstrator:* G. W. LOUGHEED.  
                                   *Junior Demonstrator:* E. S. JEFFREY.

*Technical Assistants.* C. G. DIX, MISS M. HANNA.

*Secretarial Assistant:* MISS S. H. CLUTTON.

## FOURTH YEAR

*Lectures:*—Two lectures are given weekly during the session on methods of physical examination, the explanation and interpretation of physical signs and history taking. The course is concluded by an introduction to the study of Medicine, dealing with the physiological aspects of disease. One lecture is given weekly on Applied Anatomy.

*Clinics:*—The class is divided into small groups, each of which is in charge of a clinician who instructs a different group each trimester. Practical instruction is given four hours a week in methods of physical examination and history taking in the wards of the hospital.

*Clinical Microscopy:*—One lecture is given weekly throughout the session on Clinical Microscopy. Once a week, during the session, each group of students receives practical instruction in the laboratory in blood counting and the microscopical examination of blood, urine, faeces, stomach contents, sputum, cerebro-spinal fluid, transudates and exudates.

Instruction in bed-side clinics and in clinical microscopy follows as closely as possible the work discussed in the lectures of the previous week.

*Instruments:*—Students beginning clinical work are strongly advised to supply themselves with the following instruments: Stethoscope, Tape Measure, Dermograph, Haemocytometer (Bürker-Neubauer), Haemoglobinometer (Dare or Sahli), Thermometer, Head-mirror, Ophthalmoscope, Laryngoscope, Microscope with Condenser and Oil Immersion Lens.

Special arrangements have been made for obtaining these instruments (See Page 16).

*Text-books:*—Physical Diagnosis, Cabot, Rose; Clinical Methods, Hutchison and Rainy; Clinical Laboratory Diagnosis, Morris, Emerson, Wood; The Examination of the Patient, Foster; Medicine, Osler, Stevens, Taylor; Pathological Physiology, Hewlett.

#### FIFTH YEAR

*Lectures:*—A weekly lecture is given on the different types of disease. One lecture is given weekly on Applied Anatomy.

*Clinics:*—The class is divided into small groups for clinical instruction in the wards of the hospital. Three bed-side clinics on different types of disease are given weekly throughout the session. The students devote three hours weekly to taking histories, examining patients and carrying out the clinical laboratory investigation of their cases under the direction of the Staff.

A weekly clinic is held in the hospital amphitheatre, at which selected cases illustrating different types of disease are presented.

Groups consisting of one-sixth of the Year attend, twice a week for a period of ten weeks, clinical demonstrations on Infectious Diseases at the City Isolation Hospital and the Hospital for Sick Children.

During the session each student is required to prepare at least three complete records of medical cases. These records must be certified as satisfactory by the clinician in charge of the clinic of which the student is a member.

#### SIXTH YEAR

In the Final Year the class is divided into three groups—Medicine, Surgery and Specialties. For a period of ten weeks each group devotes its whole time to Clinical Medicine.

Under the supervision of the Staff each student takes charge of a certain number of cases in the wards of the hospital. He is required to take a clinical history, make a complete physical examination and a routine laboratory examination of each case under his charge, and follow its progress and treatment while in hospital.

The class in Clinical Medicine is divided into smaller groups for bed-side instruction and work in the Medical Out Patient Department. Four bed-side clinics are given weekly at which students report the examination of the cases under their charge. This is followed by a clinic on the diagnosis, progress and treatment of selected cases.

Each clinic group attends the Medical Out Patient Department twice a week. Here the student is responsible for taking a clinical history and making a physical examination of all new cases. Upon the completion of this examination a member of the Staff discusses with him the diagnosis and treatment of the case.

Through the Social Service Department of the Hospital the Staff obtains information as to the social, hygienic and economic conditions of the patients' homes, which is of the greatest value in the diagnosis and treatment of individual cases. With their assistance homes are visited, abnormal conditions remedied and patients discharged from hospital are encouraged to return for periodic examinations. In this manner the student is afforded an opportunity of observing the results of treatment and the effects of social, hygienic and economic factors in the treatment of disease.

Two theatre clinics are given weekly to all students of the Final Year at which cases are presented and the diagnosis, prognosis, prevention and treatment of various diseases discussed.

*Special Lectures and Clinics:*—The general course of clinical instruction in Tuberculosis, Venereal Disease and Diseases of the Skin is supplemented by special lectures and clinics.

*Tuberculosis:*—Ten lectures are given on the diagnosis, prognosis, prevention and treatment of tuberculosis. Each student attends nine Out Patient clinics on tuberculosis—six at the Toronto General Hospital and three at the Hospital for Sick Children. Both in lectures and clinics particular attention is paid to the early diagnosis of pulmonary tuberculosis, the examination of contacts, the methods for the prevention of the disease and its treatment in the home or sanitarium.

*Diseases of the Skin.*—In addition to six lectures on diseases of the skin each group in the Final Year attends fifteen Out Patient clinics on adults and five on children.

*Venereal Disease:*—Three lectures are given on the prevention and general principles of treatment of venereal disease, and the functions of a Venereal Clinic. Each clinic group attends in rotation five special Out Patient clinics on syphilis and takes part in the examination and treatment of cases.

*Clinical Pathological Conference:*—A weekly clinical pathological conference is held, at which students are required to report the results of their clinical examination of fatal cases under their care. This is followed by a demonstration of the autopsy specimens and a discussion of the clinical and pathological findings

#### FIFTH AND SIXTH YEARS

*Text-books:*—Diseases of the Chest, Norris and Landis; Principles and Treatment of Heart Affections, Mackenzie; Clinical Disorders of the Heart-beat, Lewis, The Soldier's Heart and the Effort Syndrome, Lewis;

Diseases of the Digestive Canal, Cohnheim; Clinical Examination of the Nervous System, Krohn; Diseases of the Nervous System, Purves-Stewart; Diabetes Mellitus, Joslin; Diseases of the Skin, Sequeira; Pulmonary Tuberculosis, Fishberg; Diagnostics and Treatment of Tropical Diseases, Stitt; Food for the Sick, Strouse and Perry.

*Reference Books*.—A System of Medicine (11 volumes), Allbutt and Rolleston; Modern Medicine (5 volumes), Osler and McCrae; Monographic Medicine (6 volumes), Barker; Oxford Loose Leaf Medicine (6 volumes), Christian and MacKenzie; Nelson's Loose Leaf Medicine (7 volumes); Internal Medicine (3 volumes), Wilson; Diseases of the Heart, Mackenzie; Diseases of the Heart and Aorta, Hirschfelder; Diseases of the Arteries and Angina Pectoris (2 volumes), Allbutt; Clinical Medicine, Barker; The Form and Functions of the Central Nervous System, Tilney and Riley; Diseases of the Nervous System, Jelliffe and White; Diseases of the Skin, Morris, Macleod, Stelwagon and Gaskill, Hartzell, Schamberg, Pussey; Studies in Deficiency Disease, McCarrison; Endocrinology and Metabolism (5 volumes), Barker; Diseases of the Digestive System (2 volumes), Bassler; Diseases of Middle Life, Craig.

## PAEDIATRICS

*Associate Professor of Medicine, in Charge of Paediatrics*: ALAN BROWN.

*Associate in Paediatrics*: A. W. CANFIELD

*Senior Demonstrators in Paediatrics*: A. P. HART, E. A. MORGAN, G. R. PIRIE, G. E. SMITH.

*Junior Demonstrators in Paediatrics*: GLADYS BOYD, ROY SIMPSON, F. F. TISDALL.

*Special Research Fellow in Paediatrics*: G. A. DAVIS.

*Chemist to the Sub-Department of Paediatrics*: ANGELIA M. COURTNEY.

*Assistant Chemist*: IDA F. MACLACHLAN.

*Secretarial Assistant*: KATHLEEN L. HEAD.

## FIFTH YEAR

Students of the Fifth Year devote most of their time to learning the essential principles of Paediatrics, and the difference in the manifestation of disease between adult and child. A series of thirty-two theatre clinics is given, illustrated by plates, lantern slides, morbid specimens and by the presentation of patients when the nature of the subject under discussion makes it desirable. Among the subjects included in these theatre clinics are: (1) the physiology and pathology of digestion in infants; (2) percentage and caloric method of feeding, (3) classification of digestive disturbances; (4) deficiency diseases of childhood; (5) congenital and acquired cardiac disease; (6) tuberculosis; (7) syphilis, (8) nephritis; (9) acute conditions arising in the newborn infant; (10) child welfare.

## SIXTH YEAR

Students of the Sixth Year devote their whole time to clinics—bed-side and Out Patient. In addition to this each student is required to spend seven hours in one of the child welfare clinics conducted by the Department of Child Hygiene. In these clinics he is given an idea of the normal feeding and growth of infants and children. During the Sixth Year Course three hours' practical work is required of each student in the milk modifying laboratory of the Hospital for Sick Children, where he is taught the home modification of milk formulae.

*Fellowships*.—The Sub-Department of Paediatrics is prepared to offer to graduate students two full-time Fellowships in Paediatrics. These Fellowships include a certain amount of clinical work as well as laboratory investigation, thus serving to keep the research worker in touch with clinical problems and further his interest in Clinical Paediatrics.

*Text-books*.—(1) Diseases of Infancy and Childhood, Holt; (2) Infant Feeding, Grulee; (3) Simplified Infant Feeding, Dennet; (4) The Normal Child—its Care and Feeding, Alan Brown.

*Reference Books*.—(1) Diseases of Children, Garrod, Batten and Thursfield; (2) Common Disorders and Diseases of Childhood, Still; (3) Management of the Sick Infant, Porter and Carter; (4) System of Paediatrics (5 volumes, Abt); (5) Diseases of Nutrition and Infant Feeding, Morse and Talbot; (6) Practical Infant Feeding, Hill.

## THERAPEUTICS

*Professor of Therapeutics*: R. D. RUDOLF.

*Lecturer in Anaesthesia*: S. JOHNSTON.

*Senior Demonstrators in Therapeutics*: C. E. C. COLE, W. V. WATSON.

*Fellow*: W. E. BROWN.

*Junior Demonstrators in Anaesthesia*: T. R. HANLEY, W. H. CARVETH, C. H. ROBSON, J. J. HURLEY, H. J. SHIELDS, W. R. PARKS.

Therapeutics is taught in the two final years, and is made as practical as possible.

## FIFTH YEAR

*Lectures*.—In the Fifth Year a course of lectures is given in which the general principles of the subject are considered in a systematic way, emphasis being laid upon the fact that Therapeutics includes far more than the employment of drugs. The whole matter is considered more from the standpoint of disease than from that of drugs and other remedies. Diet, specific therapy, hydrotherapy, the various forms of physio-therapy, and climate are also dealt with. Once a week one-third of the class are given a practical demonstration at the hospital of methods of therapy, patients being freely used to illustrate the points.

## SIXTH YEAR

*Clinical Work.*—In the final year the students are taken in groups at the General Hospital and the different methods of dealing with diseased conditions are demonstrated and discussed, generally upon actual patients. Here also prescription writing is practised. These meetings are quite informal and are conducted five times a week in the medical theatre at the hospital and in the wards, the Socratic method being largely used.

Besides having lectures in the Fifth Year and demonstrations in the Final Year on Anaesthesia, each student is required to give six anaesthetics before graduating.

*Text-books.*—Hare's Practical Therapeutics; Rudolf's Medical Treatment, Dudley W. Buxton, Anaesthetics, J. W. Gwathmey, Anaesthesia; J. Blumfield, A Practical Handbook of Anaesthesia; H. Bellamy Gardner, Manual of Surgical Anaesthesia.

*Reference Text-books.*—Hutchinson & Collier's Index of Treatment, Friedenwald and Rührah, Diet in Health and Disease; Wood, Therapeutics, its principles and practice; Potter, Ortnier's Treatment of Internal Diseases; Cushny, Pharmacology and Therapeutics, Hare, System of Therapeutics; Forchheimer's Therapeutics of Internal Diseases; Osborne's Principles of Therapeutics; Rendle Short's Prognosis and End-results of Treatment, Sajou, Analytic Cyclopaedia of Practical Medicine, Oxford Index of Therapeutics (Sorapure); Stevens' Therapeutics, Martinet, Medical Treatment of Disease.

## SURGERY AND CLINICAL SURGERY

*Professor of Surgery.* CLARENCE L. STARR.

*Professors of Clinical Surgery.* A. PRIMROSE, H. A. BRUCE, F. N. G. STARR.

*Associate Professor of Clinical Surgery:* P. W. H. McKEOWN

*Assistant Professors of Clinical Surgery.* W. E. GALLIE, WARNER W. JONES,  
H. A. BEATTY.

*Associates in Surgery and Clinical Surgery* C. B. SHUTTLEWORTH, G.  
SILVERTHORN, E. S. RYERSON, WALLACE SCOTT, N. S. SHENSTONE,  
G. E. WILSON, D. E. ROBERTSON, H. E. CLUTTERBUCK

*Demonstrators in Clinical Surgery* A. B. WRIGHT, M. H. V. CAMERON,  
R. E. GABY, OLIVER MADEE, ROBIN PEARSE, R. R. GRAHAM,  
C. D. PARKER, R. I. HARRIS.

*Junior Demonstrators:* C. H. HAIR, G. C. McINTYRE, T. A. ROBINSON,  
R. H. THOMAS, A. B. LEMESURIER, W. A. COSTAIN, J. H. WOOD,  
R. A. McCOMB, J. C. McCLELLAND, E. E. SHOULDICE, H. W. WOOLKEY,  
T. A. J. DUFF, R. M. JAMES, J. W. ROSS, J. L. McDONALD, K. G.  
McKENZIE, G. S. FOULDS.

*Fellow in Surgery* J. A. MACFARLANE

*Secretarial Assistant:* MISS R. ROSS.

## FOURTH YEAR SURGERY

1 *Lectures*—A course consisting of an introduction to the general principles of surgery.

2. *Clinical Work.*

(a) Clinical study in the Out-patient Department or the Ward. Each clinical class will be taught the surgical conditions following, with History Taking, Surgical Landmarks, and the methods of making physical examinations as applied to them. Inflammation; Suppuration and Abscess; Surgical conditions of the skin and subcutaneous tissues, Bursitis; Tenosynovitis; Surgical affections of the Lymph Glands, Wounds; Haemorrhage and Thrombosis; Sepsis, infection and infectious diseases, Ulceration; Gangrene; the general features of Fractures, Dislocations and Sprains; Hernia, Bandaging.

These conditions shall constitute the subjects of examination.

(b) A course of surgically applied clinical anatomy. Part of this course will consist of a series of clinical lectures in the theatre of the Toronto General Hospital. Regional anatomy will be studied and illustrated by patients suffering from surgical conditions in different parts of the body. The anatomy of the different regions will be demonstrated by diagrams upon the blackboard, by frozen sections, and by the use of the lantern. There will be also a series of demonstrations of the anatomy of surgical conditions, including fractures, sprains, dislocations, injuries and infections of the soft structures, etc., carried on with small groups in the Anatomical Building in a unit set apart for the Surgical Department.

(c) A series of demonstrations in surgical pathology. These demonstrations will be conducted conjointly by the clinicians and the pathologist and will consist of elementary demonstrations of the gross pathology, the histology, the bacteriology and the analyses of the blood, urine, etc., including not only microscopic findings, but the pathological chemistry necessary for complete clinical investigation. Individual types will thus be presented for the purpose of illustrating the steps necessary in the clinical study of surgical cases as indicated in the gross pathology together with the microscopic and chemical findings.

(d) Demonstrations to small groups of students will be conducted in minor surgery and bandaging. In this series instruction will be given in names and uses of various instruments and equipment used in surgery. Material and methods of preparation and use of various dressings, bandages, and splints will be demonstrated.

#### FIFTH YEAR SURGERY

1. *Lectures.*—Thirty lectures are given throughout the session on some of the general principles of surgery. In addition, short courses are given in the special surgery of certain regions of the body, e.g., the abdomen, the head and neck, the extremities, etc., the courses varying from year to year.

2. *Clinical Work.*—(a) Clinical work in the wards will be conducted according to the time-table provided. During the year the student is taught to make a complete examination of surgical cases in order that he may be able to arrive at a diagnosis and to learn the appropriate scientific treatment. The following conditions will be studied and will be, as far as possible, the subjects of the clinics: (1) Injuries and diseases of the bones and joints; (2) the surgery of the neck, acute and chronic inflammation, primary and secondary new growths, diseases of the thyroid gland; (3) surgery of the thorax, empyema, tumours of the breast; (4) surgery of the abdomen, appendicitis, cholecystitis, ulcer of the stomach and duodenum, cancer of the stomach, general peritonitis, tuberculous peritonitis, gall stones, acute and chronic intestinal obstruction, abdominal injuries, haemorrhoids, fistula in ano, anal fissure; (5) the surgery of the kidney, stone, pyonephrosis, surgical conditions of the bladder and use of the cystoscope; (6) the surgery of the scrotum and testes, acute and chronic inflammation, tumours, hydrocele, varicocele; (7) the surgery of mouth, ulcers, tumours of the lip, tongue and gum, tumours of the upper and lower jaw; (8) diseases and injuries of blood and lymph-vascular systems; (9) surgery of the extremities including fractures, amputations, dislocations, injuries to joints, and injuries to nerves; (10) injuries and diseases of the head and spine.

A special course in orthopaedic surgery will be given in the Hospital for Sick Children.



(b) Each student will be required to take three complete surgical histories during the year. This work will be directed by the resident or senior house-surgeon. One history is to be left at the secretary's office at the end of each trimester. Each such history is to be annotated and initialed by the clinician, and after revision by the student to be examined by the Professor of Surgery.

(c) A course of surgically applied clinical anatomy.

This course will be conducted in the clinical theatre of the Toronto General Hospital. Regional anatomy will be studied on and illustrated by patients suffering from surgical conditions in different parts of the body. The anatomy of the different regions will be demonstrated by diagrams upon the blackboard, by frozen sections and by the use of the lantern.

(d) A series of demonstrations in surgical pathology.

These demonstrations will be conducted conjointly by the clinicians and the representatives of the Department of Pathology and will consist of demonstrations of the gross pathology, the histology, the bacteriology and the analyses of the blood, urine, etc., including not only microscopic findings, but the pathological chemistry necessary for complete clinical investigation. The demonstrations will illustrate the steps necessary in clinical study, and the appropriate treatment, based upon the gross pathology, together with the microscopic and chemical findings.

#### SIXTH YEAR SURGERY

The work of the Sixth Year in Surgery is entirely clinical, including one weekly mid-day clinical lecture.

##### *Clinical Work.*

(a) Two clinics will be given in each week to the students of this year. The clinical classes in each Hospital will consist of the students assigned to the surgical services in the various Hospitals.

(b) The students in this year are assigned at the Secretary's Office to the surgical services at the Toronto General, St. Michael's, Western and Hospital for Sick Children, the number of men to each service depending on the number of students in the class. These men will be required to act as clinical clerks and to perform the following duties, the students alternating as arranged in the various divisions:

1. To act as assistants to the House Surgeon and to be prepared to carry out his instructions at all times.
2. To take the history of each patient allotted to him within twenty-four hours of his admission to the wards. To record the physical examination and to do and record the necessary laboratory work.
3. To attend all the operations performed on his service, and to be prepared to act as second assistant.
4. To do whatever dressings are detailed to him by the House Surgeon.

5. In the event of an autopsy on any patient who has been under his charge, to assist and make the necessary records.

6. To work in the Out-patient Department and Emergency Department.

7. To be required to attend the clinics given to the Fourth and Fifth Years on his service, and to be prepared to give to the clinician a detailed account of the cases being presented, and, if necessary, to act as demonstrator under the direction of the clinician. Further, to be required to provide and prepare the material for each clinic to the Fourth and Fifth Years.

8 During his term of service he shall be prepared when directed to do so, to assist in giving and to give anaesthetics to the patients on his service, under the supervision of the anaesthetist.

(c) Once a week a conference will be held in the Pathological Department, when the Professor of Pathology and the members of the clinical teaching staff will meet to discuss the pathological material which has been sent from the clinic to the Pathological Department during the preceding week. These conferences between the Pathologist and the clinician will form a very important part of the tuition of the student in Surgery in the Sixth Year.

Students in the Sixth Year will receive special instruction in physiotherapy. The value of massage, gymnastics, electricity, hydropathy, etc., in the treatment of surgical cases will be demonstrated.

*Text-books*:—Principles of Surgery, Rose and Carless, Haubold, Gask and Wilson, Da Costa; Minor Surgery, Foote; Process of Diagnosis, Ryerson, Surgical Diagnosis, Gould, de Quervain (translation); A Synopsis of Surgery, Ernest W. Hey Groves, Surgical Materials and Their Uses, MacLennan.

*Reference Text-books*:—Principles of Surgery, Choyce, Thomson and Miles, Oxford Loose Leaf Surgery, Surgical Treatment, Cheyne and Burghard, Binnie, Kocher, Alexis Thomson; Minor Surgery, Vaughan and Burnham, Orthopaedic Surgery, Lovett and Jones, Jones, Whitman; Fractures and Dislocations, Scudder, Cotton, Surgery of the Chest, Paget; Lungs, Fowler and Godlee, Surgery of the Brain, Rawling; Operative Surgery, Horsley, Rowlands and Turner, After-Treatment of Surgical Patients, Bartlett; On the Spleen, Moynihan, Urology, Irwin.

## OBSTETRICS AND GYNAECOLOGY

*Professor of Obstetrics and Gynaecology:* W. B. HENDRY.

*Associate Professor of Obstetrics:* K. C. MCILWRAITH.

*Associate Professor of Gynaecology:* F. W. MARLOW.

*Assistant Professors of Obstetrics and Gynaecology:* F. A. CLELAND, R. W. WESLEY.

*Associates in Obstetrics and Gynaecology:* W. A. SCOTT, J. G. GALLIE,  
N. D. FRAWLEY.

*Associate in Obstetrics:* J. A. KINNEAR.

*Senior Demonstrators in Obstetrics and Gynaecology:* W. W. LAILEY, W. G. COSBIE.

*Junior Demonstrators in Obstetrics and Gynaecology:* H. B. VANWYCK,  
D. M. LOW, S. J. N. MAGWOOD.

*Secretarial Assistant:* MISS M. F. CARSON

## FIFTH YEAR

*Lectures:*—Obstetrics:—A course of lectures illustrated by diagrams, lantern slides and models will be given. Stated generally, the course consists of two parts. The first part deals with the anatomy and physiology of the female organs of reproduction, the anatomy, physiology and management of normal pregnancy, labour and the puerperium, and the care of the infant. The second part is concerned with abnormal conditions arising during pregnancy, labour, and the puerperium, and with maladies of the infant.

Practical demonstrations on anatomy, the mechanism of labour, the use of obstetrical instruments, etc., will be given to small sections of students.

*Gynaecology:*—A course of lectures illustrated by pathological specimens, diagrams and lantern slides will be given. The lesions of each organ are considered in detail and the methods of gynaecological diagnosis and treatment indicated.

*Clinical Work.*—Obstetrics:—The student attends clinics at the Toronto General Hospital. At these clinics practical instruction is given in the examination of patients, the diagnosis of pregnancy, the management of labour and the puerperium and the care of the infant.

*Gynaecology:*—Clinical instruction is given at the Toronto General Hospital, in the method of case taking, the examination of patients, the use of instruments, and in the conduct of operations.

*Pathological Demonstrations:*—The naked eye and microscopic pathology of the common obstetrical and gynaecological lesions will be demonstrated in the museum.

## SIXTH YEAR

*Obstetrics.*—The student attends the Obstetrical Hospital for a period of five weeks during which time he is given an opportunity to see all the work of the hospital, and to assist in the management and treatment of cases. He may be required to attend patients in their own homes and to perform other duties in connection with the Out-Patient Service. Clinical lectures are given once a week on interesting and abnormal cases.

*Gynaecology.*—Clinical instruction in the examination and diagnosis of gynaecological cases is given to small sections of students. Each student is required to act as clinical clerk to the cases assigned him, to be present at any operations required, and to follow the after-treatment. Operations will be performed on stated days and at these the members of the clinic may be present.

*Pathological Demonstrations.*—A series of demonstrations in continuity with those held during the fourth year will be given in the museum.

*Text-books:—*

*Obstetrics.*—Eden; Whitridge Williams, Polak, De Lee.

*Gynaecology.*—Barbour & Watson; Graves; Crossen, Eden & Lockyer; Polak; Anspach; Bland.

*Obstetrics and Gynaecology.*—Munro Kerr, Fairbairn

*Reference Text-books:—*

*Obstetrics.*—Bumm; Winckel; Munro Kerr, Operative Obstetrics; Davis, Operative Obstetrics; Lea, Puerperal Infection, Ballantyne, Antenatal Pathology.

*Gynaecology.*—Kelly, Operative Gynaecology; Berkeley & Bonney, Gynaecological Surgery; Winter & Ruge, Gynaecological Pathology, translated by Clark; Cullen, Cancer of the Uterus.

## OPHTHALMOLOGY

*Professor:* J. M. MACCALLUM.

*Assistant Professors:* D. N. MACLENNAN, W. H. LOWRY.

*Senior Demonstrators:* M. LYON, W. W. WRIGHT, F. A. AYLESWORTH,  
C. E. HILL

*Secretarial Assistant:* MISS M. KINGSMILL

## FIFTH YEAR

Instruction will be given by quizzes, recitations or lectures. The class will be divided into small sections. In each section the applied anatomy of the eye, orbit and surrounding structures will be considered, followed by instruction in the use of the ophthalmoscope, retinoscope and other instruments of diagnosis. The methods of external examination of the eye, the use of the test type, test lenses and the principles of refraction will be thoroughly dealt with.

## SIXTH YEAR

Instruction will be wholly clinical and practical, and will include Ophthalmoscopy and its relations to general medicine, advanced refraction. Each student will be required to determine the refraction of patients in the Out-Patient Clinic and must, for this purpose, supply himself with an ophthalmoscope and a retinoscope. When possible the students will be shown the more usual operations on the eye.

There will be a short course of didactic lectures

*Ophthalmology:*—

*Text-books:*—J. Edward Jackson; May; Mayou; Nettleship; Parker; Parsons; Swanzy, Veasey, Hepbourne, Sym, Marshall.

*Works of Reference:*—de Schweinitz; Weeks; Fuchs; Posey & Wright; Theobald; Ball.

## OTO-LARYNGOLOGY

*Professor:* PERRY G. GOLDSMITH.

*Associate Professor:* GILBERT ROYCE.

*Associates:* GEO. M. BIGGS, EDMUND BOYD.

*Senior Demonstrators:* J. C. CALHOUN, A. A. CAMPBELL.

*Junior Demonstrators:* D. E. STAUNTON WISHART, H. H. BURNHAM.

*Secretarial Assistant:* MISS O. V. ROSS

The course of instruction in oto-laryngology is carried on in the Toronto General Hospital, where the facilities placed at the disposal of the students are unusually complete. There is an indoor service of twenty beds, and in the outdoor, in addition to the large clinic, where the final year students receive instruction, there is a room set aside for the fifth year classes, with eight cubicles for examination purposes.

This course is carried on during both the fifth and sixth years of the curriculum.

Clinics for the final year students are given one day a week at the Hospital for Sick Children. There is an in-door service which varies from ten to fifteen beds.

#### FIFTH YEAR

In the fifth year the students will receive instruction in:

- (1) The normal anatomy of the ear, nose and throat.
- (2) The methods of using the head mirror and the various instruments required in examining the ear, nose and throat.
- (3) The ordinary tests for hearing.
- (4) The recognition of the ear, nose and throat, in their normal conditions, as exemplified by clinical material.

At the close of the session a clinical examination will be held.

#### SIXTH YEAR

In the sixth year the students will be divided into small groups for the purpose of studying the commoner conditions met with in general practice, and as much clinical material as possible will be utilized for the purposes of personal observation.

A series of lectures will be delivered upon the various diseases of the ear, nose and throat, ordinarily met with by the general practitioner.

In the final, sixth year, two clinical examinations will be held. One at the completion of the trimester and the other at the end of the session.

*Text-books:*—Ear, Nose and Throat, Dan MacKenzie; Diseases of Nose Throat and Ear, A Logan Turner

*For Reference:*—Diseases of Nose and Throat, Sir St. Clair Thomson; The Nose and Throat and their Treatment, Parker & Colledge; Diseases of Nose and Throat, Herbert Tilley, Diseases of the Ear, Albert Gray; Diseases of the Ear, Richard Lake.

#### PSYCHIATRY

*Professor of Psychiatry:* C B FARRAR

*Associate of Psychiatry:* HARVEY CLARE.

*Assistant Professor in Psychology:* E A. BOTT.

*Demonstrators:* ERIC K. CLARKE, F. S VROOMAN, D. R. FLETCHER,  
G. McLARTY

#### FOURTH YEAR

*Lectures.*—A series of didactic lectures is given, outlining some of the more important psychoses.

A special course on psychiatry, in conjunction with psychology, is outlined among the options. This course is of great use to those who wish to follow psychiatric work, as it gives sixty hours a year for five years and covers the whole range of modern psychiatry. For particulars vide literature on optional course

## FIFTH YEAR

*Clinical Work.*—A clinical course will be given. The student will be afforded opportunity to obtain a practical knowledge of psychiatry, and to study the laboratory and clinical methods employed in the diagnosis and treatment of various forms of insanity.

*Text-books:*—Clinical Psychiatry, Diefendorf; Psychiatric Neurological Examination Methods, by Wimmer Hoisholt; Mental Diseases, by Walter Von Gulick; Dementia Praecox and Paraphrenia, by Emil Kraepelin; Mental Disorders, by Barnes, Manual of Psychiatry, Rosanoff, Text-book of Psychiatry, Bleuler-Brill, Manic depressive Insanity, Kraepelin.

## PATHOLOGY AND BACTERIOLOGY

*Professor of Pathology and Bacteriology and Curator of the Museum and Laboratories.* OSEAR KLOTZ.

*Associate Professor of Bacteriology.* W. L. HOLMAN.

*Assistant Professor of Pathology and Assistant Curator of the Museum.* W. L. ROBINSON.

*Lecturer in Pathology.* W. MAGNER.

*Lecturer in Bacteriology.* G. C. CAMERON.

*Assistant in Pathological Museum.* A. T. HENRY.

*Demonstrators in Pathology.* G. F. LAUGHLIN, G. R. PHILIP, A. MACKAY, L. R. HILL, O. C. WITHROW, I. ERB.

*Demonstrators in Bacteriology:* I. H. ERB, R. FARQUHARSON, L. R. HILL, MISS C. J. FRASER.

*Fellows in Pathology.* J. E. BATES, M. H. BROWN, D. M. MEEKISON.

*Artist.* MISS VIOLET GILLET.

*Secretarial Assistant.* MISS G. BOYD.

*Research Assistants:* MISS W. SIMPSON, MISS H. BOLES.

The course of instruction in Bacteriology is given during the second half of the 3rd year. This course is adapted to the needs of the student of Medicine, and attempts to give practical instruction concerning the important infections which are met with in general practice. The bacteria are studied not only from the standpoint of their biological characters, but also in relation to the processes which are induced by them in human tissues.

In the Fourth Year this course is followed by instruction in Pathology, the first half of the year being devoted to a study of the Principles of Pathology, while during the second half of this year the time is devoted to Special Pathology. It is attempted to make the course as comprehensive as possible using every means to allow the student to understand the Pathological lesions of tissues and the consequences. During the course in practical Pathological Histology the specimens from the Museum, illustrating the subject for study, are brought before the student with special demonstrations.

During the Fifth Year the student will spend all available time at autopsies, and he is obliged to give attendance at a minimum of twelve cases.

During the Sixth Year weekly conferences are held in conjunction with other departments in which the Pathological changes observed in certain of the more common diseases are discussed with the student and illustrative Pathological case histories are analyzed to bring out the reasons, based on Pathological grounds, of certain Clinical manifestations.

#### THIRD YEAR

During the second semester the student receives a course of lectures and practical laboratory exercises in Bacteriology. The lectures serve as a general guide to indicate the importance of certain bacteria and their actions in the tissues. The laboratory exercises are devised to permit the student to obtain a proper knowledge of the Pathogenic micro-organisms, and the means of isolation and identification of the most important bacteria. The practical course is introduced by a limited instruction on media-making and the technique of staining of bacteria and sterilization. Subsequently the student does not prepare his own media, but all of the time-consuming technical processes are attended to by the laboratory staff. During the last few weeks in this course the student is given instruction on the principles of immunity, and upon the most important laboratory methods in Serology which are used for the diagnosis of disease. During the entire course, demonstrations are offered upon the intricate problems in Bacteriology for which time is not available to the student for personal investigation.

#### FOURTH YEAR

The course in General Pathology occupies the first half of the Fourth Year, and consists of a series of lectures and a course of practical exercises. The lectures cover the subjects of General Principles, Anomalies, Degenerations, Necrosis, Pigmentations, Inflammation and Tumors. In the practical exercises the attempt is made to illustrate all points discussed during the lectures, by microscopic preparations and by examples of similar lesions obtained from our Museum. In all instances the macroscopic is taught with the microscopic study of the lesion. Great emphasis is laid upon the importance of an understanding of the inflammatory reaction, and the methods of healing which follow it. The Department possesses a series of microscopic preparations for the presentation of the practical work in General and Special Pathology. By means of these materials which have been prepared by the Assistants of the Department, the student is able to spend the allotted time in the study of the disease processes in the tissue, and he does not lose the time and effort in an attempt to carry out a technical procedure. The Department now possesses upwards of three hundred sets of these preparations, and it is hoped that these will soon be more than doubled.

During the second half of the Fourth Year, the student continues his studies in the Department of Pathology, receiving his instruction by



lectures and practical exercises in Special Pathology. During this course, the principles of Pathology which were studied in the preceding semester are applied to the individual organs of the body. In this manner the student becomes acquainted with the important lesions which make their appearance in the various tissues. These courses in Pathology are consistently illustrated by specimens from the Museum, coloured illustrations and by reference to texts and monographs. The student is encouraged to spend some time in accessory reading for which the library in this Department is available. Students desiring to acquire additional technique in preparing stained sections are encouraged to do so in their spare time.

### FIFTH YEAR

During the Fifth Year the student will attend as many autopsies as his time will permit, at the Toronto General Hospital and St. Michael's Hospital. Special attention is being given to instruction in the autopsy room, wherein the case is not only demonstrated during its dissection, but is analyzed with the Clinical report which must accompany every case. A full discussion is entered into with the students and they are encouraged to analyze and criticize any of the problems under discussion. The student must be certified for at least twelve autopsies, as well as present a thesis upon one or more of the interesting cases which he has observed.

### SIXTH YEAR

During the Sixth Year one conference a week will be held upon the principal diseases which interest the General Practitioner. These conferences will be of the nature of case analyses wherein the Pathological processes of the disease will be offered in explanation of the Clinical manifestations. The conferences will frequently be carried on in conjunction with the members of the Clinical Departments as well as with members of the other laboratory Departments.

### ADVANCED WORK AND SPECIAL RESEARCH

Opportunity is afforded to those suitably trained to pursue advanced work and special research in experimental and practical Pathology and Bacteriology. For these purposes the laboratories are equipped with the necessary apparatus and material.

#### *Text-books*

*Bacteriology and Immunology* Hiss, Zinsser and Russell; Park and Williams, Karsner and Ecker, Zinsser.

*Pathology* Delafield and Prudden; Adami and McCrae; MacCallum; Mallory, Pembrey and Richie.

## PATHOLOGICAL CHEMISTRY

*Professor:* V. J. HARDING.

*Lecturer:* G. HUNTER.

*Demonstrators:* D. H. BODDINGTON, E. JEFFRIES.

*Fellows:* B. A. EAGLES, MRS K. D. ALLIN.

*Secretarial Assistant:* MISS M. DUNCAN.

## FOURTH YEAR

A systematic laboratory course in routine chemical examination of urine, blood, and gastric contents, supplemented by lectures and demonstrations.

## FIFTH YEAR

*Lectures:*—A course of lectures extending throughout the year is given on the metabolic aspect of various pathological conditions.

*Clinical Laboratory:*—A locker with apparatus and reagents is supplied to each student in this year by the Department of Pathological Chemistry, which he will utilize for the conduct of all chemical examinations necessary to the proper study of the cases under his charge. At least ten complete urine examinations shall be carried out, and the records filed both in the Department of Pathological Chemistry and the Departments of Medicine or Surgery. For the guidance of the student in such work, an instructor is in regular attendance at hours specified on the time-table.

*Option Course:*—A laboratory course in more advanced methods of chemical examination of urine and blood. This course is particularly designed to meet the needs of those who may wish to pursue investigation work in various branches of internal medicine. The class is limited to twelve, and it is desirable that students taking this course shall have taken previous option work in biochemistry or physiology.

## SIXTH YEAR

*Clinical Laboratory:*—Space is provided each student as in the previous year for the conduct of all chemical examinations necessary for a study of the cases under his charge.

At the end of each year, each student shall make good any loss or damage to apparatus under his care. Otherwise he shall not be permitted to sit for the University examinations.

*Text-books.*—Wells, Chemical Pathology; Simon, Clinical Diagnosis.

*Reference Books:*—Lusk, Science of Nutrition; Myers, Practical Chemical Analysis of Blood; Underhill, Manual of Selected Biochemical Methods.

## HYGIENE AND PREVENTIVE MEDICINE

*Professor:* J. G. FITZGERALD.

*Associate Professor:* R. D. DEFRIES.

*Assistant Professor:* D. T. FRASER.

*Director University Health Service and Lecturer in Hygiene:* G. D. PORTER.

*Demonstrator in Industrial Hygiene:* J. G. CUNNINGHAM.

*Demonstrators in Hygiene* P. J. MOLONEY, R. R. MCCLENAHAN, H. C. CRUIKSHANK, MARY COWAN.

*Class Assistant:* MISS M. MAITLAND

*Secretarial Assistant:* MISS ISABEL SAUNDERS.

The Department of Hygiene and Preventive Medicine provides a course of lectures and demonstrations in Preventive Medicine, Hygiene and Sanitation, for students in the fifth year in the Faculty of Medicine.

Students in the Faculty of Medicine are required between the end of the Fifth and the beginning of the Sixth Year (either in June or September) to take a practical course of one month's duration in Preventive Medicine and Public Health

Lecture courses are provided also in Hygiene and Sanitation for students in the Faculties of Applied Science, Household Science and the Department of Social Service.

Laboratory and didactic courses of instruction are given to students in the Faculty of Applied Science who have elected the Sanitary and Highways option and to students in the Department of Public Health Nursing

A course of instruction for graduates in Medicine leading to the Diploma in Public Health was instituted in 1904. Details of the curriculum leading to the Diploma in Public Health will be found on page 38.

## INDUSTRIAL HYGIENE

A course of instruction in Industrial Hygiene for graduates in Medicine is available for those wishing to undertake work in this branch of Preventive Medicine

Further details of the course may be obtained on application to the Head of the Department.

Facilities for Research in Preventive Medicine, Hygiene and Public Health (Immunity, Serology and Bacteriology) are provided in the Research Division of the Connaught Laboratories, for graduates in Medicine and other suitably qualified candidates desirous of prosecuting such studies.

*Text-books*.—Fitzgerald, Practice of Preventive Medicine, Rosenau, Preventive Medicine and Hygiene; Park, Public Health and Hygiene, Overton and Denno, The Health Officer; Prescott & Winslow, Elements of Water Bacteriology; American Public Health Association Standard Methods of Water Analysis.

*Reference Books*.—Kolmer, Infection, Immunity and Specific Therapy; Ledingham & Arkwright, The Carrier Problem of Infectious Diseases; Whipple, Microscopy of Drinking Water; Chandler, Animal Parasites and Human Disease, Mock, Industrial Medicine and Surgery; Zinsser, Infection and Resistance (3rd edition).

## MEDICAL JURISPRUDENCE

*Professor*: G. SILVERTHORN.

### FIFTH YEAR

*Lectures*.—About eighteen lectures and class-room demonstrations will be given. These will be illustrated as required by lantern slides and by specimens from the Pathological Museum or from private collections.

The lecture course will embrace *inter alia* a discussion of:—Legal Criminal procedures and the relation of Medical men thereto. Medical evidence, documentary and oral, ordinary and expert. Personal identity of the living and of the dead. Thanatology: The reality of death; *post mortem* changes, autopsies and reports. Causes producing deaths by violence such as the various forms of asphyxia, heat, cold, electricity, etc. Wounds in their medico-legal relations. Blood stains and the examination of blood. Medico-legal aspects of the sexual functions, impotency, sterility and legitimacy. Pregnancy, abortion and infanticide. Rape and allied offences against chastity. Civil and criminal malpractice.

*Text-books*.—Glaister, Reese, Emerson, Draper, Buchanan's Text-book of Forensic Medicine and Toxicology.

*Reference Text-books*.—Taylor's Principles; Whitthaus and Becker; Peterson and Haines; Dixon Mann; Cattell's *Post Mortem Pathology*, Greene's Life Insurance; Atkinson's Law in Medical Practice; Cathell's The Physician Himself, Brother's Medical Jurisprudence; Wadsworth's Post Mortem Examinations.

## RADIOLOGY

*Associate* G. E. RICHARDS

*Instructors*: W. H. DICKSON, A. H. ROLPH.

### FIFTH YEAR

A series of ten lectures will be given dealing with the principles underlying the use of X-rays and radium as therapeutic agents, and the practical application of these in the treatment of disease.

## SIXTH YEAR

Twenty lectures and demonstrations are given. In this course the use of X-ray methods in the diagnosis of diseases of the Gastro-intestinal tract, the chest, and the skeletal system will be fully covered, and will be illustrated by plates and lantern slides. It is also proposed to make demonstrations to small groups in the use of the fluoroscope.

*Text-books:*—Grover, *Electro-Therapeutics*; Clark, *Radium, X-Ray and Electro-Therapy*; Knox, *System of Radiography and Radiotherapy*, 2 vols.; Carman, *Roentgen Diagnosis of Diseases of Gastro-Intestinal Tract*, Simpson, *Radium*; Baetjer & Waters, *Diseases of Bones and Joints*; George & Leonard, *The Pathological Gall Bladder*; Ruggles & Holmes, *X-ray Interpretation*; The U.S. Army Manual of Radiology.

## HISTORY OF MEDICINE

*Professor:* J. T. FOTHERINGHAM.

## SIXTH YEAR

*Lectures*—Certain periods in the development of the Healing Art will be sketched, and some of the so-called "Systems" broadly outlined, together with certain national contributions to the growth of Ancient, Mediaeval and Modern Medicine. Biographical studies will be undertaken of some of the great Masters, whose work has at various ages marked Epochs of advance, and particularly of those whose names are associated with the beginnings of scientific knowledge upon which present-day Medicine is founded.

## LECTURES IN DENTISTRY

The Faculty have arranged for a course of lectures to be delivered during the Session, on the application of Dentistry to Medicine. The instruction will be given by a man properly qualified for the purpose and will be delivered to the students of the final year. The course will be obligatory.

## BUILDINGS

The University of Toronto provides the most ample facilities for the practical, didactic and clinical instruction of medical students. The following buildings are utilized by the student in his course in Medicine: Biological, Chemical and Physics Buildings; Medical Building; Pathological Building; Anatomical Building; University Library; Toronto General, St. Michael's and Western Hospitals and Hospital for Sick Children.

## THE MEDICAL BUILDING

The Medical Building is situated between the University Library and the Biological Building.

It is three storeys in height in front, with an additional storey and sub-basement in the wings, which extend eastward. Two large lecture rooms are provided which flank the main building; the larger has accommodation for about three hundred and fifty students; the smaller for about two hundred students.

The three main floors of the building are arranged upon what has been called the unit-system, a unit-room being thirty feet long by twenty-three feet deep, lighted on its long face by large windows. These rooms may be united so as to form large laboratories or may be cut in two where it is necessary to have smaller rooms. On the ground floor in the main portion are situated in front the Secretary's office, a large faculty room, a lavatory, and a library.

The building is utilized for conducting the work in the Departments of Physiology, Biochemistry, Pharmacology, Hygiene and Preventive Medicine, including the University branch of the Connaught Laboratories, and Zymology. In it are also the administrative offices of the Faculty of Medicine.

## THE LIBRARY

The University Library is contained in a building of its own, situated on the east side of the campus that lies to the south of University College. All students who have paid a library fee to the Bursar of the University are entitled to the privileges of the Library. Besides Reading Rooms the building contains Departmental Studies, which may be used as study-rooms by honour students in the various branches in which the Professors hold seminary courses, and private studies, intended for members of the Faculty or advanced students engaged in research work. The Library is opened at 8.45 every morning and remains open until 10 in the evening during the academic term. Books in ordinary use may not be taken out of the building during the daytime, but are lent for the night shortly before the hour of 5 p.m., to be returned the following morning before 10 o'clock. Books not in general demand may, on special application, be borrowed for a longer period. Failure to return a borrowed book at the proper time and other breaches of the regulations are punishable by fine or suspension from the privileges of the Library.

## THE PATHOLOGICAL BUILDING

This building is situated on University Avenue and connected by a covered corridor with the Out-patient Department and so with the rest of the Toronto General Hospital. On the basement, or ground floor, are the Pathological Museum, lecture room and autopsy room as well as students' coat room and lavatories. On the first floor are rooms for the

routine pathology and class rooms for pathological histology and bacteriology. On the second floor there are laboratories, and rooms for the Departmental Library and special classes in Pathology, in addition to laboratories for bacteriological and serological investigation. On the third floor are the class rooms for systematic instruction in pathological chemistry and the laboratories for the staff in this Department, including balance, polarimeter, combustion and experimental rooms. Above this is the accommodation for animals.

Connected with the autopsy room is a cold storage plant with accommodation for twelve cadavers, and by means of a brine circulation, refrigerators in the staff laboratories on the first, second and third floors are kept cold. For many of the laboratories too there is a compressed air service.

The lecture room has seats for about 150 students and is connected with a room for preparing experimental demonstrations.

The museum is planned especially for the instruction of students; a small catalogue room and a preparation room are connected with it.

The class rooms are divided into small units and are exceptionally well lighted.

Lockers are provided for more than 300 students in the laboratories for pathological chemistry so that every student working in the Hospital may have his own place and apparatus.

The building is of fire-proof construction throughout.

## THE ANATOMICAL BUILDING

The new Anatomical Building is situated to the east of the Medical Building to which it is parallel, and with the south wing of which it is connected.

It consists of four storeys and a basement except at the north end where there is a large lecture-room, two storeys in height and capable of accommodating 250 students. Beneath the lecture room are several well-lighted and commodious rooms which are equipped as a laboratory for experimental surgery. The remainder of the basement gives ample space for the preservation and storage of material.

The first floor is devoted to cloak-rooms for those occupying the lecture-room, a chart room and a photographic room, together with two demonstration or study rooms. Accommodation is also reserved for a Department of Anthropology which, it is hoped, may shortly be established.

On the second floor is a commodious Museum occupying the south end of the building, with a preparation room in connection. Two laboratories planned to accommodate classes in Histology, Embryology and Neurology are also provided upon this floor, together with a second lecture room with seating accommodation for approximately 100 students, and two demonstration rooms.

The third floor provides for a departmental library, private rooms for members of the staff and a dissecting room, while the fourth floor is devoted mainly to a series of dissecting rooms, well lighted by sky-lights. Certain of these rooms may be used as required for special classes and provision is also made for an osteology room and a demonstrators' room. Ample locker and lavatory accommodations are provided.

## ROYAL ONTARIO MUSEUM

ARCHAEOLOGY, GEOLOGY, MINERALOGY, PALAEONTOLOGY, ZOOLOGY.

Students of the University in all departments are recommended to avail themselves of the privileges of the Museum, which, although under separate control, is intimately connected with the work of the University.

The Museum is open on all week days from 10 a.m. to 5 p.m., also on Thursday Evenings from 7 to 9, Sundays 2 p.m. to 5 p.m. The admission is free to the public on Tuesday, Thursday, Saturday and Sunday. On other days an admission fee of fifteen cents is charged.

By a resolution of the Board of Trustees all regular students of the University may be admitted free on all days of the week by presenting their card of registration.

## TORONTO GENERAL HOSPITAL

The Hospital has more than seven hundred beds, and during the last year admitted to its wards 11,483 patients

The Out-door Department, which has been elaborately equipped with especial attention to the requirements of teaching as well as treatment, is designed to receive and care for several hundred patients each day, if necessity demands. Last year 70,466 out-patients were treated.

The Hospital is for the treatment of acute medical and surgical diseases, and the members of the staff are, in nearly every instance, drawn from the University Medical Faculty.

The Hospital Block contains ten acres, and the group of buildings includes almost everything necessary to enable a student to acquire a practical knowledge of the profession of Medicine.

On the south-west corner is situated the large Pathological Building, which is also an integral part of the Hospital. In it are found the Pathological, Clinical and Chemico-Pathological Laboratories, as well as the Autopsy Room, Museums, etc. The Pathological Building is regarded as one of the most complete in America. There were 236 autopsies during the year.



North of the Pathological Unit is found the Out-Patients' Department already referred to, then follows the Emergency Hospital, fully equipped with every modern device necessary for the immediate care and treatment of emergency patients. In this building arrangements have been made for the teaching and demonstration of practical methods in minor surgery.

The Medical Wing, the Administrative Building and Surgical Wing face College Street. These groups embody every modern requirement in hospital equipment, and special facilities for the student are provided—such as lecture room, cloak room, etc.

Twelve Operating Rooms are to be found in the different Surgical sections. South of the Surgical Wing is located the Obstetrical Hospital with eighty beds. The number of births in this Department last year was 1,808.

The X-Ray Department is one of the most complete on the continent, and averages more than one hundred patients a day sent in for examination. Complete courses are given to the students, so that they can qualify themselves in X-ray work. A well equipped Hydro-Therapeutic Department exists in connection with the X-Ray Department.

### HOSPITAL FOR SICK CHILDREN

This large Hospital, with 262 beds, is entirely devoted to diseases in children, there having been 6,171 cases treated during the last year. In the Out-patient Department, 58,240 patients were attended. The old building has been remodelled and a large new wing has been built on the west side of the present building. These alterations and additions include new operating theatres, out-patient department, pathological laboratories and wards for infectious cases.

### ST. MICHAEL'S HOSPITAL

This institution is conducted as a General Hospital, where medical, surgical and obstetrical cases are admitted. The number of patients admitted last year was 4,551 while 47,561 cases were treated in the out-patient department. There were 448 births in the Obstetrical Department. The accommodation has been enlarged by the addition of a new wing, so that there are now 400 beds. An operating theatre has been provided constructed with all the necessary modern equipment for the practise of antiseptic surgery.

### TORONTO WESTERN HOSPITAL

This is a modern institution affording excellent opportunities for clinical study. During the past year 4,278 patients were admitted. There is an out-door service where dental, tubercular, surgical, medical, gynaecological and special clinics are held; the number of patients treated in the Out-patient Department last year was 16,843.

Two large operating theatres are provided and the operations performed last year numbered 2,477. There is also an Obstetrical Department.

There are four public wards specially adapted for clinical teaching each containing thirty beds, two of these wards are devoted to medical and two to surgical cases.

### INTERNES IN THE HOSPITALS

A number of resident assistants are appointed annually from the graduates in medicine of Universities, and hold their positions for one or two years.

They will have full opportunities for acquiring experience in the general and special wards of the Hospitals, and during the session they will have charge under the physicians and surgeons in the wards.

### CONNAUGHT LABORATORIES

*Director:* J. G. FITZGERALD.

*Associate Director:* R. D. DEFRIES.

*Research Member:* A. H. CAULFIELD.

*Research Associates:* D. T. FRASER, P. J. MOLONEY, C. H. BEST, MARY COWAN.

*Research Assistants:* BEECHER WELD, M. MAITLAND, DOROTHY J. MCCULLOUGH.

*Bacteriologists:* A. BOLTON, H. WIGHAM.

*Chemists:* D. A. SCOTT, KENNETH MACALPINE.

The Connaught Laboratories consist of Research, Antitoxin and Insulin Divisions. These laboratories were established to provide facilities for research in the field of Preventive Medicine, Bacteriology, Serology, and Immunity; and the production and distribution of Public Health Biological Products and Insulin. The distribution of diphtheria antitoxin was commenced in May, 1914, and since that date the production of other sera and vaccines has been undertaken and the distribution extended throughout Canada and Newfoundland, the British West Indies, and to New Zealand. The preparation of Insulin (pancreatic extract) was commenced in January, 1922.

The products distributed include: diphtheria antitoxin, tetanus antitoxin, anti-meningitis serum, small-pox vaccine, anti-pneumococcus serum, typhoid vaccine and rabies vaccine and insulin.

Since February 1st, 1916, the Provincial Board of Health of Ontario has distributed, free of charge in Ontario, all of the above named products. The Secretaries of the Local Boards of Health need only make application to the Chief Officer of Health, Parliament Buildings, Toronto, and supplies are at once forwarded. Physicians and Hospitals are supplied by the Secretary of their Local Boards of Health.

Similarly in September, 1917, the Bureau of Public Health, Saskatchewan, began free distribution of diphtheria antitoxin in that Province. (The antitoxin so supplied is prepared by these Laboratories.)

The Department of Militia and Defence was supplied with tetanus antitoxin and other biological products used by the Canadian Expeditionary Force Overseas and in training in Canada.

In October, 1917, a farm of over fifty acres and completely equipped laboratories and stables were presented to the University by Colonel Albert Gooderham. These Laboratories were given to provide facilities for research in Preventive Medicine, and also to provide for the production of serums and vaccines. In connection with these Laboratories there has been established the Connaught Laboratories Research Fund, the interest on which is utilized for the support of research in Preventive Medicine.

## THE BANTING AND BEST CHAIR OF MEDICAL RESEARCH

*Professor:* F. G. BANTING.

*Research Associates.* C. H. BEST and G. H. W. LUCAS

*Research Assistants:* MISS SADIE GAIRNS, MISS JESSIE RIDOUT.

The Banting and Best Chair of Medical Research was established by the Board of Governors of the University as the result of a special grant of the Legislature of the Province of Ontario in 1923.

The terms of the Act establishing the Banting and Best Research Fund provide for an annual grant to the University of Toronto for the promotion of Medical Research in accordance with the following preamble which appears in the Act:—

"Whereas F. G. Banting, M.D., and C. H. Best, B.A., in the prosecution of medical research have made an important discovery by means of which it is now possible to ameliorate the condition of persons suffering from the disease known as diabetes, and it is believed that prosecuting the research will result in perfecting a remedy for the cure of that disease, and it is desirable and expedient in the public interest to provide by legislative grant the continuation and prosecution of kindred researches."

Research under the provisions of this Chair began in July, 1923, and researches on several medical problems are being carried on in laboratories in the Medical building of the University. Work is also being carried out in the Insulin Division of the Connaught Laboratories, with funds provided from this grant.

## GENERAL INFORMATION FOR STUDENTS

### PHYSICAL TRAINING

By order of the Board of Governors each male student proceeding to a degree must take Physical Training in the First and Second Years of his attendance. He must first undergo a medical examination by the Director of the University Health Service and must then register for Physical Training at the office of the Athletic Association in Hart House. Students of all years who wish to take part in any form of athletics or physical exercise must first undergo a medical examination by the Director to determine the character of his training.

Each woman student proceeding to a Bachelor's Degree in the Faculty of Medicine shall be required, during the first year of her attendance, to take Physical Training, following an examination by the Medical Advisor for Women.

A student who has failed to complete satisfactorily the course in Physical Training prescribed for the First Year will not be permitted to register in the Third Year, and the student who has failed to complete satisfactorily the course in Physical Training prescribed for the Second Year, will not be permitted to register in the Fourth Year.

### DISCIPLINE

The Council of University College and the governing bodies of the federated universities and colleges, respectively, have disciplinary jurisdiction over and entire responsibility for the conduct of their students in respect of all matters arising or occurring in or upon their respective college buildings and grounds, including residences.

The councils of such of the faculties as have assigned for their separate use any building or buildings and grounds, including residences, have disciplinary jurisdiction over and entire responsibility for the conduct of all students in their respective faculties in respect of all matters arising or occurring in or upon such building or buildings and grounds.

In all such cases, and, save as aforesaid, as respects all students to whatsoever college or faculty they may belong, disciplinary jurisdiction is vested in the Caput, but the Caput may delegate its authority in any particular case or by any general regulation to the council or other governing body of the university or college or faculty to which the student belongs.

If there be any question as to the proper body to exercise jurisdiction in any matter of discipline which may arise, the same shall be determined by the Caput, whose decision shall be final.

Disciplinary jurisdiction includes the power to impose fines

## REGULATIONS RELATING TO STUDENTS IN ATTENDANCE

No student will be enrolled in any year, or be allowed to continue in attendance, whose presence is deemed by the Council of the Faculty to be prejudicial to the interests of the University.

Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

Unless special permission is granted by the Council, a student who, at the close of two sessions in the University, has failed to secure standing in his year, will not be permitted registration in the Faculty of Medicine.

The Students' Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power, subject to the approval of the Caput, to deal with violations of the regulations governing conduct.

Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities after application by the Executive of the Students' Administrative Council, will be severely disciplined.

All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Caput.

A student who is under suspension, or who has been expelled from a College or from the University, will not be admitted to the University buildings or grounds.

The constitution of every University society or association of students in the Faculty of Medicine and all amendments to any such constitution must be submitted for approval to the Council of the Faculty. All programmes of such societies or associations must, before publication, receive the sanction of the Council of the Faculty through the President. Permission to invite any person not a member of the faculty of the University to preside at or address a meeting of any society or association must be similarly obtained.

The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

## THE MEDICAL SOCIETY

This Society consists of the graduates and undergraduates enrolled in the Faculty of Medicine of the University of Toronto. It is under the patronage of the members of the Faculty of Medicine and its object is to deal with all matters pertaining to the general interest and welfare of the students, especially.—

(a) To encourage interest in general medical science and literature, and in pursuit of medical studies.

(b) To provide telephones for the convenience of students.

(c) To be a means of communication between the Student body and the Faculty or others, when such communication is desirable.

(d) To provide a series of entertainments for students at intervals during the Session.

(e) To assist the student who becomes ill during the Academic year.

(f) Each student will be required to pay the annual fee of two dollars to the Bursar, to be divided as follows:—

Medical Society Fee.....	\$1.00
Athletic Fee. ....	1.00



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FACULTY OF APPLIED SCIENCE AND  
ENGINEERING

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## FACULTY OF APPLIED SCIENCE AND ENGINEERING

### HISTORICAL SKETCH

The Legislative Assembly of the Province of Ontario during the Session of 1877 gave its sanction to the establishment of a School of Practical Science on the basis proposed in the memorandum of the Minister of Education confirmed by the Lieutenant-Governor in Council on the 3rd day of February, 1877.

By the scheme thus approved the Government effected an arrangement with the Council of University College whereby the students of the School of Practical Science enjoyed full advantage of the instruction given by its professors and lecturers in all the departments of science which were embraced in the work of the School.

This arrangement was brought to an end in 1889 by the transfer of the department of science, above referred to, from University College to the University of Toronto under the operation of the University Federation Act.

In order that the students of the School might continue to enjoy the advantage of the instruction of the above departments, the Senate of the University of Toronto passed a Statute in October, 1889, affiliating the School to the University, which Statute was confirmed by the Lieutenant-Governor on the 30th day of October, 1889.

By an Order-in-Council, approved by the Lieutenant-Governor on the 8th day of November, 1889, a Principal was appointed, and the management of the School was entrusted to a council composed of the Principal as chairman, and the Professors, Lecturers and Demonstrators appointed on the Teaching Faculty of the School. By the terms of this order the management and discipline of the School was vested in the Council.

By the University Act of 1906 the School of Practical Science became the Faculty of Applied Science and Engineering of the University of Toronto, although on December 14th, 1900, the Senate by Statute, subsequently approved by the Lieutenant-Governor in Council, established a Faculty of Applied Science and Engineering but without assuming any liability for its support or maintenance. Under this Statute the teaching Staff and Examiners of the School of Practical Science became the teaching Staff and Examiners of the Faculty, although the University retained the right to appoint the Examiners for the Bachelor of Applied Science and professional degrees.

On April 8th, 1892, the Senate of the University established the Degree of B.A.Sc., which was open to those who held the Diploma of the School and were prepared to devote a fourth year to advanced work. In the Session 1909-1910 a new Course extending over four years and leading to the Degree of B.A.Sc. came into operation, taking the place of the long established Diploma Course of three years, which came to an end in the Session 1910-1911.

## MATRICULATION

A candidate for admission to the First Year in the Faculty of Applied Science and Engineering must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him credit in the following subjects of Pass and Honour Matriculation:

## PASS MATRICULATION

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

Any three of:

LATIN (Authors and Composition)

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

{ SPANISH (Authors and Composition) *or*

{ ITALIAN (Authors and Composition)

{ EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*

{ AGRICULTURE (Parts I and II)

## HONOUR MATRICULATION

(At least 50%)

ENGLISH (Literature and Composition).

MATHEMATICS (Algebra, Geometry and Trigonometry).

One of:

LATIN (Authors and Composition).

GREEK (Authors and Composition).

FRENCH (Authors and Composition).

GERMAN (Authors and Composition).

SPANISH (Authors and Composition).

ITALIAN (Authors and Composition).

In selecting the options it is recommended that students take French, German and Experimental Science. In the Department of Architecture, French is required, in the Departments of Chemical Engineering and Mechanical Engineering it is desirable that students take German. For students intending to take Metallurgical Engineering, Spanish and Experimental Science are recommended.

The regulations respecting Matriculation, together with a schedule of examinations which may be accepted as equivalent, may be found in the Curriculum for Matriculation on application to the Registrar of the University.

A candidate from the British Isles must present a certificate showing that he has passed or has exemption from the Preliminary Examination of the Institution of Civil Engineers.

## ADMISSION

Applications for admission must be made on blank forms supplied by the Registrar, and should be forwarded as early as possible to the Registrar of the University, together with all Pass and Honour Matriculation or equivalent certificates.

Applications based upon certificates other than those mentioned will be considered as occasion may require. Such certificates must be accompanied by an official statement of the marks in the various subjects upon which the certificate was granted.

ADMISSION *AD EUNDEM STATUM*

An undergraduate of another University may be admitted *ad eundem statum* on such conditions as the Senate on the recommendation of the Council of the Faculty may prescribe.

An applicant for admission *ad eundem statum* must submit with his petition (1) a calendar of his University giving a full statement of the courses of instruction, (2) an official certificate of character and academic standing

## REGISTRATION

Students in any year will be required to register in person on the date specified in the Calendar for the registration of students in that year. Those who present themselves on subsequent days must petition the Council to be allowed to register. Council reserves the right to reject applications of, or impose penalties upon, those who fail to report on the dates specified.

## ENQUIRIES

Enquiries with reference to requirements of admission to the Faculty of Applied Science and Engineering are to be addressed to the Registrar of the University.

Communications relating to curricula, instruction, examinations and standing therein, in the Faculty of Applied Science and Engineering are to be addressed to the Secretary of the Faculty.

## DEGREES

*Degree of Bachelor of Applied Science (B.A.Sc.)**Degree of Bachelor of Architecture (B.Arch.)*

There are six graduating Departments leading to the Degree of Bachelor of Applied Science (B.A.Sc.) and one graduating Department leading to the Degree of Bachelor of Architecture (B.Arch.), viz.,

1. Civil Engineering.
2. Mining Engineering.
3. Mechanical Engineering.
4. Architecture.
5. (Discontinued.)
6. Chemical Engineering.
7. Electrical Engineering.
8. Metallurgical Engineering.

Descriptions of the courses in these Graduating Departments are given on pages 38, 39, 44, 47, 51, 54, 57, 60.

In the fourth year, optional courses are arranged in certain departments. Students are required to submit their selection to the Secretary in writing, not later than September 15th. The proposed selection must be approved by Council before adoption.

*Degree of Master of Applied Science (M.A.Sc.)**Degree of Master of Architecture (M.Arch.)*

Graduates holding the Degree of B.A.Sc. of this University or those holding the degree of another University recognized as equivalent, may take post-graduate work proceeding to the Degree of Master of Applied Science (M.A.Sc.). (For requirements, see page 106.)

Graduates holding the Degree of B.Arch. or B.A.Sc. in Architecture of this University, or those holding the Degree of another University recognized as equivalent, may take post-graduate work proceeding to the Degree of Master of Architecture (M.Arch.). (For requirements, see p. 106.)

*Professional Degrees*

Graduates in Applied Science and Engineering, and graduates of the School of Practical Science, may, after three years spent in professional work, present themselves for the degrees of Civil Engineer (C.E.), Mining Engineer (M.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Chem. E.), Metallurgical Engineer (Met. E.), as the case may be, subject to the rules and regulations established by the University. (See page 107.)

## FEES

All fees are payable at the Bursar's office between the hours 10 a.m. and 1 p.m. of each week day except Saturday (or may be remitted by mail)

The annual fees, including tuition, library, laboratory supplies and one annual examination for each year, shall be as follows.

If paid in full on or before November 5th . . . . . \$150.00

If paid by instalments.—

First instalment, if paid on or before November 5th.... 75 00

Second instalment, if paid on or before February 5th.... 78 00

Repeating the year—If paid in full on or before November 5th 75 00

The above fees are payable in advance. After November 5th a penalty of \$1.00 per month will be imposed until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply.

Students must have paid the fees due in the first term before proceeding to the work of the second term.

## GENERAL FEES

Matriculation, or registration of Matriculation. . . . . \$ 5 00

Supplemental examination.. . . . 10 00

Admission *ad eundem statum* . . . . . 10.00

Degree of B.A.Sc. . . . . 10 00

Degree of B. Arch. . . . . 10.00

Degree of M.A.Sc. . . . . 25 00

Degree of M.Arch. . . . . 25.00

Physical Training (see page 21) . . . . . 5.00

Supplemental Physical Training (see page 21) . . . . . 10 00

Hart House (see below)... . . . . 8.00

Students' Administrative Council (see page 21)..... 3.00

## DUES AND DEPOSITS

(Payable to the Secretary of the Faculty at the time of registration )

Engineering Society membership . . . . . \$2.00

Athletic Association membership . . . . . 1.00

Annual deposit, Departments 1, 3, 4, 7 . . . . . 3 00

Departments 2, 6, 8 . . . . . 8.00

Charges for waste, neglect and breakage are to be met out of the deposit fee, the balance of which will be refunded to the student at the end of the session on application to the Secretary.

If the foregoing deposits do not cover the cost of breakage due to carelessness or neglect, the balance shall be paid by the student to the Secretary and in default of such payment the results of his examination will be withheld.

## HART HOUSE FEE

Every male student in attendance, proceeding to a Bachelor's Degree in the Faculty of Applied Science and Engineering, is required to pay to

the Bursar before December 1st the annual fee of eight dollars for the maintenance of Hart House. If this fee is not paid by the above date a penalty of two dollars will be imposed, making the total fee ten dollars

#### STUDENTS' ADMINISTRATIVE COUNCIL FEE

Every student in attendance, proceeding to a Bachelor's Degree in the Faculty of Applied Science and Engineering, is required to pay to the Bursar at the time of the entry of his name with the Secretary the annual fee of three dollars for the support of the Students' Administrative Council.

#### PHYSICAL TRAINING FEE

Every male student in attendance proceeding to a Bachelor's Degree in the Faculty of Applied Science and Engineering is required to pay to the Bursar the annual Physical Training fee of \$5.00 at the opening of each session in which Physical Training is compulsory for that student.

A student who has failed to complete satisfactorily the course in Physical Training prescribed for the First Year will not be permitted to register in the Third Year; and the student who has failed to complete satisfactorily the course in Physical Training prescribed for the Second Year will not be permitted to register in the Fourth Year.

Every student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year, and who must take this work during the Second or Third Year respectively of his course, will be required to pay to the Bursar at the opening of the session a Supplemental Fee of \$10.00, in addition to the prescribed Physical Training fee.

#### SCHOLARSHIPS AND PRIZES

Through the generosity of friends of the University, encouragement has been given to both undergraduate and graduate work in the various branches, by establishing the following scholarships and prizes:

Name of Scholarship	Years Eligible	Amount	Described on page
Ontario Association of Architects...	I	\$100	22
Harvey Aggett.....	II	\$ 75	22
Boiler Inspection & Insurance Co.	III	\$150	22
Jenkins Brothers, Limited. ....	III	\$100	22
Toronto Architectural Guild...	IV	..	22
C. J. Rhodes.. . . . .	II, III, IV	£300	23
Khaki University & Y.M.C.A. .	II, III, IV	Loans	24
Jardine Memorial .....	All	\$100	24
S. Ubakata. ....	All		25
U. of T. War Memorial . ....	All	\$250	25
Aeneas McCharles... ..	All & Grad.	\$1,000	25
1851 Exhibition.....	Graduate	£250	26
Nipissing Mining Co.. ....	Graduate	\$1,100	28
A. R. Kaufman . . . . .	Graduate	\$600	28

**ONTARIO ASSOCIATION OF ARCHITECTS' ARCHITECTURAL SCHOLARSHIP**

The Ontario Association of Architects offers a scholarship in the Department of Architecture of the value of \$100 to the student who has obtained the highest standard of general proficiency during the first year. This scholarship will be awarded annually in May, 1922 to 1926 inclusive.

**HARVEY AGGETT MEMORIAL SCHOLARSHIP**

This scholarship was donated by Mr. J T Aggett, of Toronto, as a perpetual memorial to his son, the late Lieutenant Harvey Aggett, who enlisted in March, 1915, during his second year in this Faculty, and was killed in action at Passchendaele on 6th November, 1917.

This annual scholarship of the value of seventy-five dollars is to be awarded to a student of the second year in this Faculty who, obtaining honours and being one of the first three in his year by his standing at the annual examinations relative to the pass requirements in his department, has been adjudged highest of the three in general student activities and service in the University during his period of attendance.

**BOILER INSPECTION AND INSURANCE COMPANY SCHOLARSHIP**

The Boiler Inspection and Insurance Company of Canada offers a Scholarship in the Department of Mechanical Engineering of the value of \$150.00 to the student who obtains highest Honour Standing in the regular examinations of the third year.

The successful candidate will be expected to proceed to his fourth year during the session next following the date of the award.

The amount of the award will be credited by the Bursar to the fees of the fourth year of the successful candidate.

**JENKINS SCHOLARSHIP IN ENGINEERING**

The Jenkins Scholarship in Engineering, presented by Jenkins Bros., Limited, has been donated to continue for a period of five years, the first award to be made in 1925.

This annual scholarship, of the value of One Hundred Dollars, is to be awarded to the student of the third year registered in one of the six departments of Civil, Mining, Mechanical, Chemical, Electrical or Metallurgical Engineering, who has the highest aggregate of percentages for the first, second and third years, relative to the requirements of his department

**TORONTO ARCHITECTURAL GUILD MEDAL**

The Toronto Architectural Guild was the organization of local architects from which sprang the Ontario Association of Architects. When the new and wider association became firmly established, the Guild disbanded and handed over to a trustee board certain funds for the establishment of a Medal to be awarded in the Department of Architecture of the University of Toronto.

The Trustee Board, now that the fund has accumulated considerably, announces its intention of awarding this medal annually to a senior student showing outstanding ability in Architectural Design.

#### THE RHODES SCHOLARSHIP

The trustees of the late Mr. C. J. Rhodes have assigned one of the Rhodes Scholarships to the Province of Ontario.

This scholarship will hereafter be thrown into open competition in the Province, subject to the following conditions—

1. Candidates must be British subjects, with at least five years' domicile in Canada, and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

2. Candidates must be at least in their Sophomore Year at some recognized degree-granting University or College of Canada, and (if elected) complete the work of that year before coming into residence at Oxford.

3. Candidates may compete either in the Province in which they have acquired any considerable part of their educational qualification, or in the Province in which they have their ordinary private domicile, home or residence.

In each Province there is a Committee of Selection, appointed by the Trustees, in whose hands the nomination will rest. The Secretary of the Committee of Selection for Ontario is Norman S. Macdonnell, Esq., Barrister, Sun Life Building, Toronto.

The Committees of Selection are instructed to bear in mind the suggestions of Mr. Rhodes, who wished that, in the choice of his Scholars, regard should be had to

(a) Force of character, devotion to duty, courage, sympathy, capacity for leadership.

(b) Ability and scholastic attainments.

(c) Physical vigor, as shown by participation in games or in other ways.

Every candidate for a Scholarship is required to furnish to the Committee of Selection for his Province the following.—

(a) A certificate of age.

(b) A photograph preferably unmounted and not larger than 4×7 inches.

(c) A written statement from the President or Acting President of his College or University to the effect that his application as a suitable candidate is approved.

(d) Certified evidence as to the courses of study pursued by the Scholar at his University, and as to his gradings in those courses. This evidence should be signed by the Registrar, or other responsible official, of his University.

(e) A brief statement by himself of his athletic and general activities and interests at College, and of his proposed line of study at Oxford.

(f) Not more than four testimonials from persons well acquainted with him.



- (g) References to four other responsible persons, whose addresses must be given in full, and of whom two at least must be professors under whom he has studied.

It is in the power of the Committee of Selection to summon to a personal interview such of the candidates as they find desirable to see, and, save under exceptional circumstances, no Scholar will be elected without such an interview. Where such an interview is dispensed with, a written statement of the reasons will be submitted to the Trustees.

The next appointment will be made for 1926, applications for this Scholarship with all required material must reach the Secretary of the Committee of Selection not later than October 20th, 1925.

The Scholarship is of the value of £300 a year, and is tenable for three years, subject to the continued approval of the College at Oxford of which the Scholar is a member. In addition a scholar will receive, until further notice, an annual bonus of £50.

Rhodes Scholar, graduate of this Faculty —

W. J. Browne, B.A.Sc., 1919.

#### THE KHAKE UNIVERSITY AND Y.M.C.A. MEMORIAL SCHOLARSHIP FUND

The Khaki University and Y.M.C.A. Memorial Scholarship Fund was established by the Khaki University Committee. At the present time this fund is being used to make loans to returned-soldier students of the higher years. Applications for such loans should be made to the President of the University.

#### THE JARDINE MEMORIAL PRIZE FOR ENGLISH VERSE

1. This prize, of the value of \$100, shall be open to any regular undergraduate student who has been in actual attendance at the University during the academic year preceding the date of submission (November 1) or who graduated in the previous academic year

2. The subject and metre of the poem shall be left to the choice of the competitor.

3. It is suggested that the length of the poem should be not less than 100 or more than 300 lines.

4. The poems shall be in the hands of the Registrar of the University by November 1st.

5. Each poem shall be signed with a pseudonym and the competitor's name shall be submitted to the Registrar in a sealed envelope on which the pseudonym shall be written.

6. With his or her name the competitor shall enclose a signed statement that the poem is absolutely his or her original work

7. The competition shall be judged by a board of five examiners, consisting of the head of the Department of English in each of the four colleges, and of a fifth examiner to be chosen by these four.

8. The examiners shall have the power to withhold the award in any year if no poem which has been submitted for that year be found worthy of the prize.

#### THE UBUKATA FUND

The S. Ubukata Fund of \$10,000, the gift of Mr. S. Ubukata, provides for the establishment of prizes, medals, scholarships and loans for which Japanese students of all faculties and colleges may be eligible. Information regarding the conditions of award may be obtained from the Registrar of the University.

#### THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIPS

Three Scholarships, each of the value of two hundred and fifty dollars have been established by the Alumni Federation of the University from the War Memorial Fund to be awarded to students in the Faculty of Applied Science and Engineering.

The general basis on which the above scholarships may be awarded is as follows:

- (a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918
- (b) Standing in course of studies.
- (c) Need of assistance.
- (d) Such other general qualifications of merit as may commend themselves to the Committee.

Information regarding these scholarships may be obtained from the Secretary-Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made.

#### THE McCHARLES PRIZE

This prize was established in connection with the bequest of the late Aeneas McCharles of Provincial Government bonds of the value of \$10,000, and is awarded on the following terms and conditions, namely, that the interest therefrom shall be given from time to time, but not necessarily every year, like the Nobel prizes in a small way. (1) To any Canadian from one end of the country to the other, and whether student or not, who invents or discovers any new and improved process for the treatment of Canadian ores or minerals of any kind, after such process has been proved to be of special merit on a practical scale; (2) Or for any important discovery, invention or device by any Canadian that will lessen the dangers and loss of life in connection with the use of electricity in supplying power and light; (3) Or for any marked public distinction achieved by any Canadian in scientific research in any useful practical line. The following conditions, as passed by the Board of Governors, determine the method of award—

(1) The title shall be the McCharles Prize.

(2) The value of the prize shall be One Thousand Dollars (\$1,000.00) in money.

(3) The term "Canadian" for the purpose of this award shall mean any person Canadian born who has not renounced British alliance, and for the purpose of the award in the first of the three cases provided for by the bequest, domicile in Canada shall be an essential condition.

(4) Every candidate for the prize shall be proposed as such in writing by some duly qualified person. A direct application for a prize shall not be considered.

(5) No prize shall be awarded to any discovery or invention unless the same shall have been proved to the satisfaction of the awarding body, to possess the special practical merit indicated by the terms of the bequest.

(6) The order of priority in which the three cases stand in the wording of the bequest shall be observed in making the award; that is, the award shall go *caeteris paribus* to the inventor of methods of smelting Canadian ores; and, failing such inventions, to the inventor of methods for lessening the dangers attendant upon the use of electricity, and only in the third event, if no inventors of sufficient merit in the field of metallurgy and electricity present themselves, to the inventor distinguished in the general field of useful scientific research.

(7) The first award was made in 1910.

(8) The composition of the awarding body shall be as follows:—

An expert in Mineralogy,

An expert in Electricity,

An expert in Physics,

and four other persons. All of the members of this body shall be nominated by the Board of Governors of the University of Toronto.

#### THE 1851 EXHIBITION SCIENCE RESEARCH SCHOLARSHIP

The Royal Commissioners for the Exhibition of 1851, if satisfied with the qualifications of the candidates put forward, will each year allot three Science Research Scholarships to Canada. The University of Toronto has been invited to recommend annually one or more candidates in order of merit for these Scholarships.

1. Each candidate recommended must be a British subject and under twenty-six years of age, except under very special circumstances; he must be a bona fide student of Science of not less than three years' standing; he must also have completed a full University course and have spent at least one full academic year at this University prior to the date of recommendation.

2. The record of a candidate's work must indicate high promise of capacity for advancing science or its applications by original research. Evidence of this capacity, which is the main qualification for the Scholar-

ship, is strictly required. The most suitable evidence is a satisfactory account by the candidate of research work already performed, and the Commissioners will decline to consider the claims of a candidate unless such an account is furnished, or unless there is other equally distinct evidence that he possesses this qualification.

3. Applications for these Scholarships must be made to the Registrar of the University not later than April 15th; the latest date on which the recommendation of the University of Toronto for Scholarships offered in 1926 can be received at the Office of the Commissioners is June 1st. 1926.

4. Each Scholarship is of the value of £250 per annum, payable quarterly in advance; on presenting to the Commissioners a satisfactory final report at the expiration of his Scholarship the scholar will receive a grant of £25. A scholar who is not in a position to travel at his own expense, or for whom it is not possible to obtain free passage, may make application to the Commissioners for aid towards the payment of his fare from his home to his place of study. A Scholar will receive an additional annual allowance, not exceeding £30, towards the cost of University fees, if, in the opinion of the Commissioners, he is in need of such allowance.

5. The Scholarship will be tenable ordinarily for two years, and in cases of exceptional merit for three years. The continuation of a Scholarship for a second year will depend upon the satisfactory nature of the scholar's first year's work. Renewal for a third year will be granted only where it appears that the renewal is likely to result in work of scientific importance.

6. The scholar will be required to devote himself to research in some branch of pure or applied science, the particular nature of the work proposed to be approved by the Commissioners.

7. A scholarship may be held, with the approval of the Commissioners, at any Institution in the United Kingdom or abroad, but a scholar will not be permitted, except under very special circumstances, to conduct his investigations in the country in which he has received his scientific education.

8. Scholars will be required to furnish reports of their work at the end of each year of tenure of their scholarships.

9. Scholars will be required to devote their whole time to the objects of the scholarship, and will be forbidden to hold any position of emolument which carries with it a duty inconsistent with their obligation to the Commissioners. Scholars must in any case obtain the consent of the Commissioners before accepting any additional emoluments.

10. In case of misconduct on the part of a scholar the Commissioners may, at their absolute discretion, deprive him of his scholarship and all emoluments therefrom.

The regulations adopted by the Senate are as follows:—

The departments, students of which shall be eligible to be candidates, are —1. Bacteriology, 2 Biochemistry, 3. Botany; 4. Chemistry; 5 Engineering (chemical), 6. Engineering (civil), 7. Engineering (electrical), 8 Engineering (mechanical); 9. Engineering (metallurgical), 10 Engineering (mining); 11 Forestry; 12. Geology, 13. Mineralogy, 14 Physics; 15. Physiology, 16 Zoology.

A student shall not be deemed to be ineligible because of his being on the teaching staff of the University, if he has not been in receipt of a salary of more than \$800 per annum and has not been on the teaching staff for more than two years from graduation.

A student shall be deemed to be eligible in the year in which he intends to graduate, but if nominated for the Scholarship his nomination shall be subject to his being successful in passing his examination for his degree

The nomination of the candidate or candidates shall be made by a Board composed of seven members appointed by the Senate, and the Board shall consist of the Chancellor, the President, the Reverend Dr Bowles, the Honourable Mr. Justice Masten, the Honourable W. E. Raney, Dr. J. A. Worrell and Dr C Morse, and the Board shall have power to call to its aid as assessor any member of the teaching staff.

#### THE NIPISSING MINING COMPANY RESEARCH FELLOWSHIP

The Nipissing Mining Company has endowed a Research Fellowship in the Department of Mining Engineering to be known as The Nipissing Mining Company Research Fellowship, of the annual value of eleven hundred dollars (\$1,100.00).

This Fellowship is open to the graduates of any University.

#### KAUFMAN FELLOWSHIP IN TOWN PLANNING

Mr A R. Kaufman presented a fellowship of \$600 for research work on Town Planning in the Departments of Architecture and Civil Engineering Municipal and Structural, for the Session 1924-25

#### JUNIOR INSTRUCTORSHIPS

Provision is made for the sessional appointment in various departments of graduates as Fellows or Demonstrators, whose duties shall consist of aiding in the work of instruction under the direction of the department concerned.

Applications for appointment should be made in writing to the Secretary of the Faculty not later than September 1st.

#### RESEARCH ASSISTANTSHIPS

A number of research assistants in the School of Engineering Research are appointed annually on salary, in the various departments, to carry on the work of research under the direction of members of the staff. This

work is accepted as partial fulfilment of the requirements for the degrees of M.A.Sc. and M.Arch. These research assistants are usually recent graduates and are chosen from among those who have displayed special capacity for investigational work in their undergraduate courses. Prospective applicants should consult with members of the staff as soon as possible after the annual examination.

## REGULATIONS RESPECTING EXAMINATIONS

### REGULAR EXAMINATIONS

Promotions from one year to another are made on the results of the term work and the annual examinations. A Student proceeding to a degree must pass all the term work and the examinations in the subjects of his course and at the periods arranged from time to time by the Council.

Candidates who fail to pass in any year will be required to take again the whole course of instruction, both theoretical and practical, of the year in which they fail before presenting themselves a second time for examination. (This repetition includes vacation work.)

A student who in either term of the session fails to perform the work of his course in a manner satisfactory to the professors in charge, will not be allowed to present himself at the final examinations of the year.

In the second, third and fourth years annual examinations will be held at the beginning of the second term on all subjects completed during the first term.

No student will be allowed to write at any examination who has not paid all fees and dues for which he is liable at that time.

The pass marks required on written examinations is 40% and on practical examinations 60%.

Honours will be granted in each department to the students who obtain at least 50 per cent in each subject, and 75 per cent of the total number of marks allotted to the department at the annual examinations.

Honour Graduate standing will be granted to those who obtain honours in the final and in one previous year.

### TERM EXAMINATIONS

Term examinations may be held in any subject and at any time at the discretion of the instructor or by order of the Council, and the results of such examination may, if the Council so decides, be incorporated with those of the annual examinations in the same subjects.

### SUPPLEMENTAL EXAMINATIONS

A candidate who fails in one or two subjects at the Annual Examinations will be required to take supplemental examinations in such subjects, but no student will be allowed a supplemental examination in the laboratory work of the fourth year.

The supplemental written examinations will begin on the 22nd day of September, 1925. Notice in writing of his intention of taking such examinations (including practical ones) must be received from the candidate by the Secretary of the Faculty, and the fee of \$10 00 received by the Bursar, not later than the first of September. Council reserves the right to reject applications of, or impose penalties upon, those failing to comply with these requirements. Arrangements will be made to conduct supplemental examinations at the Survey Camp for those students in attendance.

In the case where a candidate desires to write upon an annual examination as a supplemental, his application must be received by the Secretary, and his fee by the Bursar, for the January examinations not later than the first of December and for the April examinations not later than the first of March.

Where a candidate fails to pass a supplemental examination it will be counted as one of the two supplemental examinations which may be allowed him after the next annual examination.

No student will be permitted to take the work required for a laboratory supplemental examination at any time other than the regular time of the session.

### VACATION NOTES

#### *All Departments*

Vacation notes must be handed to the Department of Engineering Drawing on or before the first day of the session.

Vacation notes must be on construction only, and contain not less than twenty, nor more than thirty pages of sketches (except in the Department of Architecture). These sketches must be freehand pencil drawings with figured dimensions.

Notes must be made in standard note books approved by the Faculty. Notes which have been taken during the session in connection with the work in drawing will not count as vacation work.

The minimum percentage of marks required for practical work must be made in the case of vacation notes (See page 104.)

### VACATION LETTERS

#### *Department of Mining Engineering*

**THIRD YEAR STUDENTS:**—Four letters to be written and mailed to the Professor of Mining Engineering, one each month, June, July, August and September; at least one letter must deal with a labour episode.

**FOURTH YEAR STUDENTS:**—The student may select either one of the following alternatives:—

- A. Four letters to be written and mailed, one each month, June, July, August and September; at least one letter to be on a labour episode: or

- B One letter describing a labour episode to be written and mailed to the Professor of Mining Engineering not later than June 30th, and an article of suitable character and length for submitting to the Engineering Institute of Canada or the Canadian Mining Institute as a student's paper, to be written and mailed to the Professor of Mining Engineering not later than September 30th. (See page 73).

## FIELD EXPERIENCE

### *Department of Mining Engineering*

The following are the regulations governing field experience certificates:

A candidate for the degree in the Department of Mining Engineering will be required to present satisfactory evidence of having had at least six months' practical experience in work connected with mining, metallurgy or geology, for which he must have received regular wages.

The time may be spent on geological survey, in ore dressing, smelter or lixiviation works, in an assay office in the vicinity of mining or metallurgical works, on any work in or about a mine other than as an office man or clerk, or in prospecting. Not more than three months on geological surveys will be accepted, and prospecting will only count one-half (i.e., four months' prospecting will be counted as two months) and must not be submitted for more than three of the six months.

Certificates must be made out, signed, countersigned and sent during the first term to the Secretary of the Faculty of Applied Science and Engineering, who will retain them.

## SHOP WORK

### *Departments of Mechanical and Electrical Engineering*

Students in Mechanical and in Electrical Engineering are not granted their degree until certificates have been submitted to the Council, and accepted as satisfactory, showing not less than 1,600 hours of mechanical experience in production under commercial conditions. Preferably the work undertaken should be in one of the manufacturing industries or trades with which the course is related. Certificates, on the standard form which may be procured from the Secretary, must be presented on or before the 1st of March of any year.

It is not desirable that a student in these courses should enter the engineering industries without having acquired some experience in mechanical production and it is therefore required that he obtain this experience under commercial conditions, so that he can appreciate shop conditions and limitations.



## REGULATIONS RESPECTING TERM WORK

Students working in any laboratory must be governed by the regulations relating thereto as made known from time to time.

No laboratory reports or drawings may be removed from the laboratories without permission. The Council reserves the right to dispose of them as may be thought proper.

### FIELD WORK

Field Work in Surveying of the First and Second Years will be taken on the University grounds, during the first term.

No field notes will be counted which have not been taken in the field and during the hours allotted to such work.

Students taking practical astronomy are required to take observations in the field for time, latitude and azimuth.

### DEPARTMENTAL EXCURSIONS TO POINTS OF INTEREST

As a part of Laboratory Instruction excursions to points of technical interest, both in Toronto and elsewhere, are arranged by the staff. These excursions are treated as laboratory periods with the same requirements as to attendance and reports. The total transportation costs in any one year will probably not exceed Ten Dollars.

### SUMMER SURVEY SESSION

Practical surveying of the Third Year will be taken previous to the opening of the fall term during the months of August and September at the University Survey Camp situated on the shore of Gull Lake, and about five miles from the Village of Minden (lot No. 9 in 13th Concession of the Township of Lutterworth). The camp may be reached by taking the train leaving Lindsay for Haliburton, and getting off at Gelert. Conveyances will be on hand to meet students and take them to the camp. Personal effects must be limited to sixty pounds in weight, which must include two pairs of blankets, or their equivalent; beds and mattresses only will be provided.

A field course in Geology will be given students in Department 2 the last week of the session at the camp.

Students will report at the camp on the dates shown on page 7.

Students of the Fourth Year in Department 1 who are taking the Astronomy Option are required to spend two weeks at the camp, beginning September 8th, after completing their Third Year

### DRAFTING ROOMS

No drawings or briefs for same will be counted which have not been made in the drafting rooms, and during the hours allotted to such work.

## THESES

In the Fourth Year each student is required to prepare a thesis on a subject approved by the Council. The title of the thesis must be sent to the Secretary of the Faculty for approval on or before November 1st, and the completed thesis must be handed in on or before January 6th and shall become the property of the University. The rules governing size, form, etc., may be obtained on application to the Secretary. (See also p. 104.)

The thesis of each student who works upon a research problem in his fourth year must deal with the subject of investigation. In such cases the theses must be handed in not later than one week prior to the close of the annual examinations.

## REGULATIONS RESPECTING STUDENTS IN ATTENDANCE

All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Caput.

A student who is under suspension, or who has been expelled from a College or from the University, will not be admitted to the University buildings or grounds.

The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

No student will be enrolled in any year, or be allowed to continue in attendance, whose presence is deemed by the Council to be prejudicial to the interests of the University.

Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

Unless special permission is granted by the Council, a student who, at the close of two sessions in the University, has failed to secure standing in his year, will not be permitted registration in the Faculty of Applied Science and Engineering.

The constitution of every University society or association of students in the Faculty of Applied Science and Engineering and all amendments to any such constitution must be submitted for approval to the Council of the Faculty. All programmes of such societies or associations must, before publication, receive the sanction of the Council of the Faculty through the Dean. Permission to invite any person not a member of the Staff of the University to preside at or address a meeting of any society or association must be similarly obtained.

## EXEMPTIONS

Applications for exemption from any of the regulations shall be made to the Council in writing and the particulars of the case fully stated.

A student shall submit to Council evidence of illness or other handicap which occurs during the session immediately after its occurrence: no petition for leniency on account of such incidents will be considered if received after the third day following the last day of examinations.

## THE GRADUATING DEPARTMENTS

The instruction in the various departments leading through the four years to the degrees of B.A.Sc. and B.Arch is designed to give the student a thorough grounding in the fundamentals of the engineering and architectural professions, and in addition a sufficient familiarity with applications of the principles to make him immediately useful upon graduation.

With the exception of Architecture and Chemical Engineering the various courses are very similar in the first year. The succeeding years are devoted to the more particular work of the departments. In the fourth year specialization develops to the extent of various options.

The graduating courses are so designed, with many subjects common to the departments of the several years, that the student upon graduation will find himself sufficiently equipped in the various fundamentals to pursue readily his studies in branches other than the one in which he has graduated and indeed to be useful in them as well. The courses in this Faculty are not planned to make specialists; the process of specialization is more properly deferred until after graduation.

In the teaching of the fundamentals, instruction is not confined wholly to applied science. As the future engineer is vitally concerned with the development of the country, it is essential that he be instructed as well in certain fundamentals in economics, administration and business which, in conjunction with his scientific training, will enable him to develop his full value.

In some departments laboratory work in the fourth year consists of an investigation of some specific problem. In all cases the student's knowledge of the original literature and printary sources of information is extended, and he is given a very desirable and useful training in methods of research. In this way the undergraduate course is linked with the graduate course (see p. 106) and with the work of the School of Engineering Research (see p. 105).

On the following pages the courses of instruction in the different departments are set forth in detail. The time devoted to lectures and practical work is indicated as accurately as possible, but is subject to modification from time to time as occasion may require.

For further information concerning the opportunities available for graduates of this Faculty, reference should be made to the pamphlet issued by the Director of Extension Work and Publicity of the University entitled "Opportunities for Graduates in Applied Science."

## 1. DEPARTMENT OF CIVIL ENGINEERING

The course in Civil Engineering is designed to meet the needs of the students who intend to take up such work as Geodetic Surveying, Railway Engineering, Municipal Engineering, Sanitary Engineering, Highway Engineering, Structural Engineering, Hydraulic Engineering, and administrative work in connection with both Engineering and Industrial undertakings.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Calculus.....	236	2	0	2	0
Analytical Geometry.....	238	1	0	2	0
Descriptive Geometry.....	160	1	0	1	0
Surveying.....	270, 271	1	5	1	0
Statics.....	1	2	0	2	0
Dynamics .....	2	2	0	2	0
Elementary Chemistry....	85	2	0	1	0
Electricity.....	135	2	0	2	0
Optics.....	185	1	2	1	2
Technical English.....	122 (a)	1	0	1	0
Business.....	121	0	0	1	0
Engineering Drawing.....	166	0	11	0	18
Physical Training.....	269	0	2	0	2

## SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Work.....	286	...	..	.	..
Calculus.....	237	1	0	1	0
Spherical Trigonometry.....	239	1	0	0	0
Elementary Astronomy.....	71	1	0	1	0
Descriptive Geometry.....	162	1	0	1	0
Surveying.....	272, 273	1	9	1	0
Dynamics.....	3	1	0	1	0

CIVIL ENGINEERING—SECOND YEAR—Cont.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Mechanics of Materials.....	4	2	0	2	0
Engineering Chemistry.....	93	1	0	0	0
Inorganic Chemistry .....	87A	1	0	0	0
Organic Chemistry.....	95	0	0	1	0
Metallurgy.....	241	0	0	1	0
Geology.....	195	0	0	2	0
Mineralogy.....	257,259	2	1	0	2
Hydrostatics.....	186	0	0	1	1
Heat.....	187	1	1½	0	0
Photography.....	188	1	1½	0	1½
Economics & Finance.....	123	1	0	1	0
Chemical Laboratory.....	89	0	3	0	3
Engineering Drawing.....	189	0	4½	0	13½
Physical Training.....	269	0	2	...	2

THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Survey Camp .....	275	...	...	...	...
Engineering Chemistry....	102	1	0	1	0
Theory of Structures.....	6	2	0	2	0
Thermodynamics.....	223, 224	1	0	1	2
Hydraulics.....	205, 206	2	0	2	3
Least Squares.....	240	0	0	1	0
Practical Astronomy and Geodesy.....	72, 73	2	2	2	0
Descriptive Geometry.....	164	1	0	0	0
Surveying and Levelling...	274	1	0	1	0
Electricity.....	143, 144(a)	1	3	1	0
Stress Graphics.....	10	1	0	1	0
Cements and Concrete....	11	0	0	1	0
Engineering Geology.....	197	1	0	1	0
Commercial Law.....	124	1	0	1	0
Public Speaking.....	133	1	0	0	0
Mechanics of Materials Laboratory.....	9	0	3	0	0
Engineering Drawing.....	173	0	12	0	15

## CIVIL ENGINEERING—FOURTH YEAR

## (a) Astronomy Option

Subject	No	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Survey Camp. . . . .	275	..		.	
Thesis.....	285	0	3	0	0
Engineering Economics..	125	0	0	1	0
Engineering Law. ....	126	1	0	0	0
Contracts and Specifications....	127	0	0	1	0
Management. ....	128	1	0	0	0
Astronomy.....	74, 76	2	23	2	0
Geodesy ...	75, 76	2	0	2	23
Photographic Surveying.	191	1	2	0	0

## FOURTH YEAR

## (b) Municipal Engineering Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285	0	3	0	0
Engineering Economics..	125	0	0	1	0
Engineering Law.....	126	1	0	0	0
Contracts and Specifications.....	127	0	0	1	0
Management.....	128	1	0	0	0
Reinforced Concrete....	15	1	0	1	0
Foundations.....	14	1	0	1	0
Hydraulics.....	211	1	3	0	0
Structural Design ....	17	1	0	0	0
Structural Design Drawing. . . . .	179	0	0	0	5
Miscellaneous Structures	19	0	0	1	0
Hygiene and Bacteriology.....	82	1	0	1	6
Biology.. . . .	81	0	5	0	0
Sanitary Chemistry....	117	1	6	0	4
Sanitary Engineering ...	280	1	3	1	6
Highway Engineering .	281	1	3	1	3
Municipal Seminar (including Town Planning).....	282	0	3	0	3
Municipal Administration (including Civics)	132	1	0	1	0

## CIVIL ENGINEERING—FOURTH YEAR—(c) Structural Engineering Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285	0	3	0	0
Engineering Economics..	125	0	0	1	0
Engineering Law.....	126	1	0	0	0
Contracts and Specifications.....	127	0	0	1	0
Management.....	128	1	0	0	0
Reinforced Concrete....	15	1	0	1	0
Foundations..	14	1	0	1	0
Theory of Structures...	12	2	0	2	0
Physical Metallurgy....	252	1	0	1	0
Structural Design.....	17, 18	2	0	1	0
Miscellaneous Structures	19	0	0	1	0
Mechanics of Materials Laboratory.....	13	0	3	0	6
Structural Design Drawing.....	178	0	22	0	22

## FOURTH YEAR—(d) Hydraulic Engineering Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285	0	3	0	0
Engineering Economics..	125	0	0	1	0
Engineering Law .....	126	1	0	0	0
Contracts and Specifications.....	127	0	0	1	0
Management .....	128	1	0	0	0
Reinforced Concrete...	15	1	0	1	0
Foundations.....	14	1	0	1	0
Theory of Structures...	12	2	0	2	0
Hydraulics. ...	207, 208, 209	3	10	3	10
Physical Metallurgy....	252	1	0	1	0
Structural Design.....	17, 18	2	0	1	0
Miscellaneous Structures	19	0	0	1	0
Electrical Laboratory...	144 (a)	0	0	0	3
Mechanics of Materials Laboratory.....	13	0	6	0	3
Structural Design Drawing.....	179	0	4	0	8



## CIVIL ENGINEERING—FOURTH YEAR

## (e) Railway Engineering Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285	0	3	0	0
Engineering Economics..	125	0	0	1	0
Engineering Law.....	126	1	0	0	0
Contracts and Specifications.....	127	0	0	1	0
Management.....	128	1	0	0	0
Reinforced Concrete....	15	1	0	1	0
Foundations.....	14	1	0	1	0
Theory of Structures ...	12	2	0	2	0
Hydraulics.....	211	1	3	0	0
Special Geology.....	204	0	0	1	1½*
Physical Metallurgy....	252	1	0	1	0
Electrical Laboratory...	144 (a)	0	0	0	3
Motive Power.....	225	1	0	1	0
Railway and Miscellaneous Structures.....	20, 19	1	0	1	0
Railway Economics....	131	2	0	2	0
Railway Location and Design.....	276	1	8	1	6
Mechanics of Materials Laboratory.....	13	0	3	0	6
Structural Design Drawing.....	179	0	6	0	6

\*The ½ hour represents two excursions during the term

## 2. DEPARTMENT OF MINING ENGINEERING

The course in Mining Engineering, which originated in 1878 as a course in Assaying and Mining Geology, is intended to serve as a preliminary training for those who expect to practice in some branch of Mining Engineering, such as exploration of mining areas and primary development, mine surveying, mining processes involving civil, mechanical, and electric work of underground workings, mining machinery and operation; milling and treatment of ores, assaying and other forms of analysis and research, and administrative work in connection with both Engineering and Industrial undertakings.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect	Lab'y	Lect.	Lab'y
Calculus.....	236	2	0	2	0
Analytical Geometry....	238	1	0	2	0
Descriptive Geometry...	160	1	0	1	0
Surveying.....	270, 271	1	5	1	0
Statics .....	1	2	0	2	0
Dynamics....	2	2	0	2	0
Elementary Chemistry ..	85	2	0	1	0
Electricity... ..	135	2	0	2	0
Mineralogy .....	255, 258	2	1	0	3
Technical English.. ..	122 (a)	1	0	1	0
Business.....	121	0	0	1	0
Mining Laboratory .....	50	0	0	0	3
Engineering Drawing....	166	0	11	0	14
Physical Training .....	269	0	2	0	2

## MINING ENGINEERING—SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Notes .. . . .	286		.		
Descriptive Geometry.....	162	1	0	1	0
Surveying .....	272, 273	1	6	1	0
Dynamics... . . . .	3	1	0	1	0
Mechanics of Materials.. .	4	2	0	2	0
Inorganic Chemistry . . .	87A	1	0	0	0
Inorganic Chemistry . . .	87B	0	0	1	0
Organic Chemistry.....	95	0	0	1	0
Metallurgy.. . . .	241	0	0	1	0
Geology . . . . .	195	0	0	2	0
Mineralogy.....	260, 261	1	2	1	2
Mining . . . . .	51, 53	1	3	0	0
Theory of Measurements..	65	1	0	0	0
Steam Engines. . . . .	216	0	0	1	0
Theory of Mechanism ..	230	2	0	2	0
Economics and Finance....	123	1	0	1	0
Chemical Laboratory.....	89, 90	0	6	0	6
Engineering Drawing.....	169	0	3	0	12
Physical Training.....	269	0	2	0	2

## THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Letters.....	68	..	..	.	.
Survey Camp. . . . .	275	..		..	..
Geological Field Work ..	193	..		..	.
Engineering Chemistry..	102	1	0	1	0
Theory of Structures ....	7	2	0	0	0
Hydraulics . . . . .	205	2	0	2	0
Analytical Chemistry....	88	1	0	1	0
Electricity.....	143	1	0	1	0
Assaying.....	45, 46	1	3	0	3
Economic Geology.....	202, 203	1	0	3	2
Dynamic and Structural Geology.....	198	1	0	0	0
Ore Dressing.....	58, 59	1	3	1	3
Physics of Ore Dressing...	64	1	0	1	0
Mining.....	54	1	0	1	0
Petrography.....	262	1	0	1	0
Metallurgy .....	243	1	0	1	0

## MINING ENGINEERING—THIRD YEAR—Cont.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Physical Metallurgy .....	244	0	0	2	0
Commercial Law.. .....	124	1	0	1	0
Petrography Laboratory .	263	0	2	0	2
Introductory Research.....	66	0	0	0	3
Chemical Laboratory....	99	0	0	0	9
Mechanics of Materials Laboratory.. .....	9	0	0	0	3
Engineering Drawing .. .	174	0	9	0	0

## FOURTH YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Letters.....	68				
Thesis.....	67	0	7	0	10
Mine Cost Keeping and Management.....	56	1	0	1	0
Thermodynamics.....	223	1	0	1	0
Assaying.....	47, 48	0	0	1	3
Electrochemistry.....	107, 108	2	3	0	0
Geology, Pleistocene and Physiographic .....	194, 201	1	1	1	0
Geology, Precambrian.....	199	2	0	0	0
Geology, Mining....	200	0	0	2	0
Metallurgy.....	247	1	0	1	6
Mining. ....	55	1	0	1	0
Ore Dressing.....	60, 61	1	6	1	0
Engineering Economics .	125	0	0	1	0
Metallography. ....	251	0	0	0	3
Power { Electrical Lab'y... ..	144 (b)	0	3	0	0
Hydraulics Lab'y..	210	0	0	0	3
Thermodynamics Lab'y.....	224	0	3	0	0

## 3. DEPARTMENT OF MECHANICAL ENGINEERING

The course in Mechanical Engineering is intended to serve as a preliminary training for those who intend to take up work connected with the design, manufacture, installation, or operation of machinery for the use of power as generated by steam, gas, oil, and water, and machinery and methods for the production, transportation, and handling of material, heating, ventilation, refrigeration, compressing of air, pumping of water, and all problems of a mechanical nature, and administrative work in connection with both Engineering and Industrial undertakings.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Calculus . . . . .	236	2	0	2	0
Analytical Geometry. . .	238	1	0	2	0
Descriptive Geometry..	160	1	0	1	0
Surveying.. . . .	270, 271	1	5	1	0
Statics . . . . .	1	2	0	2	0
Dynamics.....	2	2	0	2	0
Elementary Chemistry.	85	2	0	1	0
Electricity.....	135	2	0	2	0
Illuminating Engineering	185	1	2	1	2
Technical English.....	122 (a)	1	0	1	0
Business . . . . .	121	0	0	1	0
Engineering Drawing....	166	0	11	0	18
Physical Training. . .	269	0	2	0	2

MECHANICAL ENGINEERING—SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Work.....	286	0	0	0	0
Calculus.....	237	1	0	1	0
Descriptive Geometry...	162	1	0	1	0
Dynamics.....	3	1	0	1	0
Mechanics of Materials..	4	2	0	2	0
Engineering Chemistry..	93	1	0	0	0
Inorganic Chemistry ..	87A	1	0	0	0
Organic Chemistry.....	95	0	0	1	0
Metallurgy.....	241	0	0	1	0
Hydrostatics.....	186	0	0	1	1½
Elementary Machine Design.....	232	1	0	1	0
Electricity.....	136, 137	2	3	2	3
Steam Engines.....	216	1	0	1	0
Theory of Mechanism..	230	2	1½	2	1½
Economics and Finance..	123	1	0	1	0
Chemical Laboratory....	89	0	3	0	3
Engineering Drawing....	170	0	13	0	11
Physical Training... ..	269	0	2	0	2

THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Engineering Chemistry..	102	1	0	1	0
Theory of Structures...	7	2	0	0	0
Thermodynamics.....	217, 219	2	3	2	3
Hydraulics.....	205, 206	2	0	2	3
Heat Engines.....	218	2	0	2	0
Mechanics of Machinery.	231	1	0	1	0
Machine Design.....	233	2	4	2	10
Magnetism Electricity..	138, 140	2	3	0	0
Alternating Current ...	139, 140	1	0	1	3
Physical Metallurgy.....	244	0	0	2	0
Compound Stress.....	10 (a)	1	0	0	0
Commercial Law.....	124	1	0	1	0
Mechanics of Materials Laboratory.....	9	0	0	0	3
Engineering Drawing....	177	0	9	0	9

## MECHANICAL ENGINEERING—FOURTH YEAR

## (a) Power Plant Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis . . . . .	285	0	0	0	0
Engineering Economics..	125	0	0	1	0
Structural Design . . .	17, 18, 180	2	3	0	3
Electrical Laboratory....	144 (c)	0	0	0	3
Heat Treatment of Iron and Steel . . . . .	253	1	0	1	0
Machine Design. . . . .	235	2	7	1	6
Thermodynamics and Heat Engines . . . . .	220, 221, 222	3	9	3	9
Hydraulics... . . . .	207, 208, 209	3	8	3	8

## FOURTH YEAR

## (b) Water Power Option

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect	Lab'y	Lect.	Lab'y
Thesis.... .	285	0	0	0	0
Engineering Economics..	125	0	0	1	0
Structural Design.....	17, 18, 180	2	3	0	3
Electrical Laboratory..	144 (c)	0	0	0	3
Heat Treatment of Iron and Steel . . . . .	253	1	0	1	0
Machine Design . . .	235	2	5	1	7
Hydraulics . . . . .	207, 208, 209	3	11	3	11
Mechanics of Materials..	13	0	6	0	3
Reinforced Concrete....	15	1	0	1	0
Foundations . . . . .	14	1	0	1	0
Reinforced Concrete Design. . . . .	181	0	3	0	3

## MECHANICAL ENGINEERING—FOURTH YEAR

## (c) Industrial Option

Subject	No	Hours per week			
		First Term		Second Term	
		Lect	Lab'y	Lect.	Lab'y
Thesis	285	0	0	0	0
Engineering Economics..	125	0	0	1	0
Structural Design	17, 18, 180	2	3	0	3
Electrical Laboratory	144 (c)	0	0	0	3
Heat Treatment of Iron and Steel ...	253	1	0	1	0
Heating, Ventilation and Refrigeration	226, 227, 228	1	3	1	3
Machine Design	235	2	6	1	8
Thermodynamics and Heat Engines	220, 221, 222	3	6	3	12
Hydraulics	209, 212	1	9	1	0
Industrial Management	130	1	0	1	0



## 4. DEPARTMENT OF ARCHITECTURE

The instruction in this department is arranged mainly to lay a broad foundation for the subsequent professional life of its graduates. The curriculum is based on the belief that an architect should have an education in liberal studies, that he should understand and appreciate the other arts in their relation to architecture, and that his training in design should teach him to regard building construction as an expression of his art rather than as an end in itself. With this object in view, the course in Architecture, which was originally derived from the Engineering courses, has been gradually broadened out to include an elementary training in the sister arts of painting and sculpture, and also courses in French and English.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Studio	Lect.	Studio
Calculus.....	236	2	0	2	0
Analytical Geometry....	238	1	0	2	0
Descriptive Geometry...	161	1	0	1	0
Statics.....	1	2	0	2	0
Building Measurements..	37	1	2	1	0
Elements of Architecture	28	1	0	1	0
History of Architecture..	25	1	3	1	0
Technical English.....	122(a)	1	0	1	0
French.....	266	2	0	2	0
Modelling .....	36	0	2	0	2
Freehand Drawing ....	35	0	3	0	2
Architectural Design.	31	0	14	0	18
Engineering Drawing.	167				
Physical Training.....	269	0	2	0	2

## ARCHITECTURE—SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Studio	Lect.	Studio
Vacation Work....	286	.	.	.	.
Descriptive Geometry...	163	1	0	1	0
Mechanics of Materials..	5	2	0	2	0
Theory of Architectural Planning ..	32	1	0	1	0
History of Architecture..	25(a)	1	0	1	0
History of Ornament...	29	1	0	1	0
Illumination.....	189	1	1½	1	1½
Economics and Finance.	123	1	0	1	0
Technical English.....	122(b)	1	0	1	0
French.....	266	2	0	2	0
Modelling .....	36(a)	0	2	0	2
Freehand Drawing.....	35(a)	0	3	0	3
Architectural Design	31(a) }	0	17	0	17
Engineering Drawing. .	171 }	0	17	0	17
Physical Training.....	269	0	2	0	2

## THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Studio	Lect.	Studio
Vacation Work .....	287	..	..	..	..
Structural Design.....	18	2	0	2	0
Acoustics ..	190	1	1½	1	0
Building Materials.....	38	2	0	2	0
History of Architecture..	25(b)	1	0	1	0
History of Fine Art....	30	1	0	1	0
Architectural Composi- tion ..	33	1	0	1	0
Garden Design..	27	0	0	1	0
Commercial Law.....	124	1	0	1	0
French.....	266	1	0	1	0
Modelling.....	36(b)	0	2	0	2
Water Colour Painting..	35(b)	0	3	0	3
Architectural Design ...	31(b) }	0	18	0	18
Engineering Drawing .	175 }	0	18	0	18

## ARCHITECTURE—FOURTH YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Studio	Lect.	Studio
Vacation Work . . . .	288		.		
Thesis.....	286	0	3	0	3
Contracts and Specifications... . . . .	127	0	0	1	0
Architectural Aspects of of Town Planning ..	34	0	0	1	0
Advanced Architectural Programmes ..	26	1	0	1	0
Garden Design ....	27(a)	0	0	1	0
Structural Design.....	16	1	3	1	3
Heating and Ventilating.	40	1	0	1	0
Sanitary Science.....	39	1	0	1	0
Drawing from Life.....	35(c)	0	3	0	3
Modelling from Life.....	36(c)	0	2	0	2
AND ONE OF:					
Architectural Design..	31(c)	2	24	2	22
Architectural Engineer- ing .....	31(d), 16	4	22	3	20

## 6. DEPARTMENT OF CHEMICAL ENGINEERING

The course is designed to give the student a thorough training in Chemistry and its application to industry, as well as a general knowledge of the elements of thermodynamics, hydraulics, machine design, structural design, electricity and metallurgy. A preliminary training of this nature with subsequent practical experience will enable him to undertake the design and construction and also the operation and management of the plant required in such branches of chemical industry as are concerned with the production of chemical and pharmaceutical products, rubber goods, leather and glue, soap, meat products, food-stuffs, oils of all kinds, sugar, pulp and paper, illuminating gas, coal tar and wood distillates, paints and varnishes, explosives, dyes, glass, portland cement, metals and their alloys, electrochemical products, fermentation products, printers' inks, fertilizers, ceramic and building materials, etc.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Calculus .....	236	2	0	2	0
Analytical Geometry.....	238	1	0	2	0
Descriptive Geometry....	160	1	0	1	0
Statics .....	1	2	0	2	0
Dynamics.....	2	2	0	2	0
Elementary Chemistry...	85	2	0	1	0
Electricity.....	135	2	0	2	0
Optics.....	185	1	2	1	2
Technical English..	122(a)	1	0	1	0
German.....	267	1	0	1	0
Business.....	121	0	0	1	0
Mineralogy Laboratory...	256	0	0	0	3
Biological Laboratory....	80	0	3	0	3
Chemical Laboratory....	86	0	10	0	10
Engineering Drawing.....	168	0	4	0	4
Physical Training.....	269	0	2	0	2

## CHEMICAL ENGINEERING—SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Work.....	286				
Calculus.....	237	1	0	1	0
Mechanics of Materials....	4	2	0	2	0
Engineering Chemistry....	93	1	0	0	0
Organic Chemistry.....	96	2	0	2	0
Metallurgy.....	241	0	0	1	0
Hydrostatics.....	186	0	0	1	1
Elementary Machine Design.....	232	1	0	1	0
Electricity.....	136, 137	2	3	2	3
Industrial Chemistry.....	94	1	0	1	0
Physical Chemistry.....	98	2	0	2	0
Inorganic Chemistry.....	87A	1	0	0	0
Inorganic Chemistry.....	87B	0	0	1	0
German.....	267	1	0	1	0
Economics and Finance....	123	1	0	1	0
Chemical Laboratory.....	92	0	10	0	12
Engineering Drawing.....	172	0	7	0	3
Physical Training.....	269	0	2	0	2

## THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Engineering Chemistry....	102	1	0	1	0
Theory of Structures.....	7	2	0	0	0
Thermodynamics.....	217, 224	2	2	2	0
Hydraulics.....	205, 206	2	0	2	1
Metallurgy.....	243	1	0	1	0
Physical Metallurgy.....	244	0	0	2	0
Assaying Laboratory ....	49	0	0	0	3
Analytical Chemistry.....	88	1	0	1	0
Electrochemistry.....	107, 108	2	3	0	0
Industrial Chemistry.....	103	1	0	1	0
Organic Chemistry.....	106	2	0	2	0
Chemical Plant.....	104	1	0	1	0
German.....	267	1	0	1	0
Commercial Law.....	124	1	0	1	0
Chemical Laboratory.....	100	0	7	0	13
Engineering Drawing.....	177	0	6	0	0
Electrical Laboratory.....	144 (d)	0	0	0	3

## CHEMICAL ENGINEERING—FOURTH YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis... . . . .	285				
Industrial Management...	130	1	0	1	0
Machine Design.....	234	1	0	1	3
German .....	267	1	0	1	0
<i>or</i> Spanish.....	268	1	0	1	0
Inorganic Chemistry.....	100	2	0	2	0
Organic Chemistry.....	110	1	0	1	0
AND ONE OF					
Electrochemistry.....	114, 115	2	*	2	*
Industrial Chemistry....	112, 113	1	*	1	*
Sanitary and Forensic Chemistry and Bac- teriology.....	116	1	*	2	*
Metallurgy.....		1	*	1	*
Physical Metallurgy..	250	1	*	1	*
Zymology.....	283	*	*	*	*

\*All time not otherwise allotted must be spent in the various laboratories in the proportions assigned by the Department.

## 7 DEPARTMENT OF ELECTRICAL ENGINEERING

The course in electrical engineering is designed for those who are looking forward to work in connection with the design, manufacture, installation, or operation of electrical machinery and equipment for the generation, transmission, and utilization of power, for domestic and industrial purposes including its many applications to problems of intercommunication in connection with railway, telephone, telegraph, or radio equipment, to work in connection with electrochemical processes, and to administrative work in connection with both Engineering and Industrial undertakings.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Calculus .....	236	2	0	2	0
Analytical Geometry.....	238	1	0	2	0
Descriptive Geometry....	160	1	0	1	0
Surveying.. .....	270, 271	1	5	1	0
Statics.....	1	2	0	2	0
Dynamics.....	2	2	0	2	0
Elementary Chemistry. ..	85	2	0	1	0
Electricity.....	135	2	0	2	0
Illuminating Engineering	185	1	2	1	2
Technical English. . . .	122 (a)	1	0	1	0
Business .. . . .	121	0	0	1	0
Engineering Drawing...	166	0	11	0	18
Physical Training. ....	269	0	2	0	0

## ELECTRICAL ENGINEERING—SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Vacation Work.....	286				
Calculus.....	237	1	0	1	0
Descriptive Geometry....	162	1	0	1	0
Dynamics.....	3	1	0	1	0
Mechanics of Materials....	4	2	0	2	0
Engineering Chemistry...	93	1	0	0	0
Organic Chemistry .....	95	0	0	1	0
Inorganic Chemistry.....	87A	1	0	0	0
Hydrostatics.....	186	0	0	1	1½
Elementary Machine Design..	232	1	0	1	0
Electricity.....	136, 137	2	3	2	3
Steam Engines .....	216	1	0	1	0
Theory of Mechanism....	230	2	1½	2	1½
Economics and Finance....	123	1	0	1	0
Chemical Laboratory.....	89	0	3	0	3
Engineering Drawing.....	170	0	12	0	12
Physical Training .....	269	0	2	0	2

## THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Engineering Chemistry .	102	1	0	1	0
Thermodynamics....	217, 219	2	2	2	1½
Hydraulics.....	205, 206	2	0	2	1
Heat Engines ...	218	1	0	1	0
Mechanics of Machinery.	231	1	0	1	0
Machine Design.....	233	2	4½	2	4½
Alternating Current...	139	1	0	2	0
Physical Metallurgy ..	244	0	0	2	0
Electrochemistry ...	107, 108	2	3	0	0
Magnetism and Electricity..	138	2	0	1	0
Electrical Design.....	141, 142	1	3	1	3
Commercial Law.....	124	1	0	1	0
Electrical Laboratory..	140	0	6	0	6



## ELECTRICAL ENGINEERING—FOURTH YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285				
Engineering Economics..	125	0	0	1	0
Industrial Management	130	1	0	1	0
Applied Electricity ...	145, 146	4	20	4	19
AND ONE OF:					
Hydraulics .....	207, 208, 209	3	9	3	10
Thermodynamics...	220, 221, 222	3	9	3	9
Electrochemistry....	114, 115	2	9	2	9
OR					
Radiotelegraphy .....	147, 148	2	9	2	9
and					
Acoustics ...	190	1	1	0	0

## 8. DEPARTMENT OF METALLURGICAL ENGINEERING

This course is designed for those who intend to take up work in connection with the production, treatment and working of metals for the purposes of industry, or the design, construction, or operation of metallurgical plants including smelters, furnaces, foundries, refineries, and lixiviation works; and administrative work in connection with both Engineering and Industrial undertakings.

## FIRST YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Calculus .. . . .	236	2	0	2	0
Analytical Geometry....	238	1	0	2	0
Descriptive Geometry. .	160	1	0	1	0
Surveying. . . . .	270, 271	1	5	1	0
Statics.....	1	2	0	2	0
Dynamics.. . . .	2	2	0	2	0
Elementary Chemistry.	85	2	0	1	0
Electricity .....	135	2	0	2	0
Technical English....	122(a)	1	0	1	0
Business.....	121	0	0	1	0
Mineralogy Laboratory.	256	0	0	0	3
Engineering Drawing..	160	0	11	0	14
Physical Training. .	269	0	2	0	2

## SECOND YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Dynamics.....	3	1	0	1	0
Mechanics of Materials..	4	2	0	2	0
Chemistry.....	87A, 87B, 88, 91	2	14	1	13
Metallurgy.. . . .	241, 242	1	0	2	0
Geology and Ore Deposits .....	196	1	1	1	1
Steam Engines. . . .	216	1	0	0	0
Electricity... . . .	136, 137	2	3	2	3
Spanish . . . . .	268	1	0	1	0
Economics and Finance.	123	1	0	1	0
Engineering Drawing..	172	0	3	0	6
Physical Training.....	269	0	2	0	2

## METALLURGICAL ENGINEERING—THIRD YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Engineering Chemistry..	102	1	0	1	0
Cements and Concrete...	11	0	0	1	0
Heat Engines. . . . .	218	1	0	1	0
Electricity. . . . .	143, 144 (e)	1	3	1	3
Electrochemistry . . . . .	107, 108	2	3	0	0
Assaying.....	45, 46	1	3	0	3
Ore Dressing. . . . .	58, 59	1	3	1	3
Mining....	51, 52	1	0	1	0
Metallurgy.....	245	2	3	1	6
Physical Metallurgy....	246	1	3	1	0
Machine Design. . . . .	234	1	0	1	3
Commercial Law.....	124	1	0	1	0
Chemical Laboratory..	101	0	0	0	6
Engineering Drawing....	182	0	3	0	0
Analytical Chemistry..	88	1	0	1	0

## FOURTH YEAR

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y	Lect.	Lab'y
Thesis.....	285	0	6	0	6
Engineering Economics..	125	0	0	1	0
Contracts and Specifications.....	127	0	0	1	0
Plant Management.....	129	0	0	1	0
Thermodynamics.....	223	1	0	1	0
Assaying.....	47, 48	0	0	1	3
Ore Dressing....	60, 61	1	6	1	0
Electrochemistry.....	114, 115	2	3	2	3
Metallurgy.....	249	1	0	1	0
Metallurgy Problems. . .	248	2	6	2	6
Physical Metallurgy....	250	1	3	1	3
Power {	Thermodynamic Laboratory....	224	0	3	0
	Hydraulic Laboratory.....	210	0	0	3

## OUTLINE OF LECTURE AND LABORATORY COURSES PROCEEDING TO BACHELOR DEGREES

On the following pages the courses of instruction are set forth in detail. The time devoted to the various subjects, both for lectures and practical work, is indicated as accurately as possible; the hours, however, shown in the prescriptive schedules on pages 39 to 61 will govern.

The curriculum as printed is intended to cover the prescription for the current year only and does not imply the right of a student to have the course unchanged during any subsequent year of his attendance.

The courses are designed to give the student a sound training in the fundamental scientific principles on which the various branches of engineering are based. The instruction is given by means of lectures and practical work in the laboratories, the drafting rooms and the field.

The courses in the first two years are devoted to the theoretical and essential scientific requirements of the engineering profession as a whole, with an introduction in a few cases of the practical application of these to engineering problems.

In the third and fourth years, the subjects of the former years are continued with particular attention paid to their application to modern engineering practice in the problems of design, erection, installation and operation peculiar to the several branches of the profession.

### APPLIED MECHANICS

1. *Statics*.—T. R. Loudon.

All Departments, I Year; 2 hours per week, both terms.

This course of lectures deals with forces in a single plane, and concerns chiefly the calculation of tension, compression and shearing stresses in frame structures and solid beams.

2. *Dynamics*.—T. R. Loudon.

Departments 1, 2, 3, 6, 7, 8, I Year; 2 hours per week; both terms.

This course of lectures deals with bodies having motion of translation in one plane, also with relative motion, momentum, work and energy.

Text Book:—Tutorial Dynamics—Briggs and Bryan.

3. *Dynamics of Rotation*.—W. J. Loudon.

Departments 1, 2, 3, 7, 8, II Year; 1 hour per week; both terms.

This course covers angular motion, including moments of inertia, simple harmonic motion, the pendulum, centres of mass, suspension and percussion, the simple theory of the fly-wheel and the governor.

Text Book:—Dynamics of Rotation—Loudon.

4. *Mechanics of Materials*:—P. Gillespie.

Departments 1, 2, 3, 6, 7, 8, II Year; 2 hours per week; both terms  
 In this course the strength and elasticity of materials are mathematically treated. The stresses in such elements of structures as the tie rod, the beam, the strut and the member subjected to shear are investigated and the elementary principles of design established. In the lecture and drafting rooms through numerous problems involving the design of simple beams, columns, riveted connections, etc., these principles are exemplified. The work includes also the discussion of eccentric loading, suddenly applied loads and repeated stresses.

Reference Book—*Mechanics of Materials*—Merriman.

5. *Mechanics of Materials*:—T. R. Loudon

Department 4, II Year; 2 hours per week; both terms.

This course deals with the mathematical consideration of stress and elasticity. Among the problems taken up are the consideration of riveted joints, theory of simple and continuous beams, the theory of columns and simple column footings.

Text:—*Strength of Materials*—Boyd

6. *Theory of Structures*:—C. R. Young

Department 1, III Year; 2 hours per week; both terms

The work of the first term comprises a thorough discussion of combined stresses, columns, restrained, continuous and trussed beams, multiple section and box girders, and plate girders. A number of designs of structures and structural details are worked out in the class and drafting rooms

The second term is given chiefly to the design of a riveted truss highway span and a riveted truss railway span, the complete designs being made in the lecture and drafting rooms.

Text Books:—*Modern Framed Structures*, Part III—Johnson, Bryan and Turneaure, *Structural Members and Connections*—Hool and Kinne; *Structural Problems*—Young, *Carnegie Pocket Companion*, *Cambria Steel*

7. *Theory of Structures* —C. R. Young.

Departments 2, 3, 6, III Year; 2 hours per week; first term.

The work is practically the same as that for Department I in the first term

8. *Structural Design*—T. R. Loudon, W. J. T. Wright.

Department 4, III Year, 2 hours per week; both terms.

During the first term, the economics of the design of floor systems in timber and structural steel are discussed. The design of masonry piers, structural steel and timber columns is also gone into in the first term.

The second term is taken up in the discussion of the design of roof trusses and an introduction to reinforced concrete.

9. *Mechanics of Materials*.—P. Gillespie.

Departments 1, 2, 3, III Year; 3 hours per week; one term.

This laboratory course is intended to give the student an introduction to the experimental study of the strength and elasticity of materials. It is intended that he shall acquire some familiarity with the construction and operation of testing machines and with the properties of the ordinary building materials.

Reference:—Laboratory Instruction Sheets, Department of Civil Engineering and Applied Mechanics, U. of T., 1922.

10. *Stress Graphics*.—T. R. Loudon.

Department 1, III Year; one hour per week; both terms.

This course of lectures deals mainly with graphic methods of solving stresses in framed structures. The construction of Shearing Force diagrams, Bending Moment diagrams and Influence Lines is also dealt with.

Text Book:—Graphic Analysis—Wolfe.

10(a). *Compound Stress*.—T. R. Loudon.

Department 3, III Year, one hour per week, first term.

This course deals mainly with the discussion of methods determining the stress conditions in bodies subjected to compound stress. Both analytical and graphical methods of analysis are discussed.

11. *Cements and Concrete*.—P. Gillespie.

Departments, 1, 8, III Year; one hour per week; second term.

The manufacture, testing and use of Portland cement and the fundamentals of the theory of reinforced concrete are discussed in this course of lectures.

12. *Theory of Structures*.—C R Young.

Departments 1<sub>a</sub>, 1<sub>b</sub>, 1<sub>c</sub>, IV Year, 2 hours per week; both terms.

The work comprised in this course of lectures concerns swing bridges, arches, suspension bridges, cantilever bridges, deflections, and secondary stresses. Problems based on the lectures are worked out in the drafting rooms.

Reference Books:—Modern Framed Structures, Part II—Johnson, Bryan and Turneure, Theory of Structures—Spofford.

13. *Mechanics of Materials*.—P Gillespie.

Departments 1, 3, IV Year; a laboratory course of 3 hours per week one term and 6 hours per week the other term.

This course of experiments is intended to give the student practice in investigating the elastic and physical properties of iron, steel, concrete, timber, etc., and in the use of instruments of precision designed for that purpose.

Reference Book:—Materials of Construction—Johnson.

14. *Foundations, Retaining Walls and Dams*:—P. Gillespie, W. J. Smither. Department 1, IV Year, Department 3, IV Year, Option (b), 1 hour per week, both terms

This course of lectures is devoted to the design of the structures mentioned. Preparatory to the discussion of the practical aspects of the subjects, and in order to gain familiarity with the fundamental principles involved, a part of the first term is given over to the consideration of the theory of compound stress. The most approved forms of construction of retaining walls, footings, abutments, piers and dams are then described, and typical designs are worked out in the class and drafting rooms.

Some attention is also given to the principles of formula charting.

**Text Books and Books of Reference**:—*Retaining Walls for Earth*—M. A. Howe; *Walls, Bins and Grain Elevators*—M. S. Ketchum; *A Treatise on Masonry Construction*—I. O. Baker; *Design and Construction of Dams*—E. Wegmann.

15. *Reinforced Concrete*:—P. Gillespie.

Department 1, IV Year; Department 3, IV Year, Option (b), 1 hour per week, both terms

The theory of the strength of reinforced concrete elements including the beam, the slab, the T-beam, the column and the footing, is continued in this course

The analysis of the monolithic arch by the elastic theory is discussed, and the student is required in the drafting room to apply his knowledge to the design of simple structures.

**Reference books**:—*Principles of Reinforced Concrete Construction*—Turneure and Maurer; *Reinforced Concrete Construction*, Vol. I—Hool.

16. *Structural Design*:—T. R. Loudon.

Department 4, IV Year; 1 hour lecture and 3 hours laboratory per week, both terms

During this course of lectures, the economics of the design of buildings in reinforced concrete and steel are discussed. This course of lectures is supplemented by the actual designing of buildings in the drafting room.

**Text**:—*Principles of Reinforced Concrete*—Turneure and Maurer.

17. *Structural Design*:—C. R. Young, W. J. Smither.

Department 1<sub>a</sub>, 1<sub>d</sub>, IV Year; 1 hour per week; both terms.

Department 1<sub>b</sub> and 3, IV Year; 1 hour per week; first term.

This course of lectures is devoted to the problems connected with the structural design of buildings of timber, steel and reinforced concrete. The various structural elements such as the floors, columns, footings, walls and wind bracing, are fully discussed, and portions of typical buildings are designed in the class and drafting rooms.

**Text Books**:—*Handbook of Building Construction*—Hool and Johnson; *Architects' and Builders' Handbook*—Kidder—Nolan.

18. *Structural Design*:—C. R. Young, W. J. Smither.  
Departments 1<sub>a</sub>, 1<sub>d</sub>, and 3, IV Year; 1 hour per week; first term.  
Consideration is given in this course to the various types of mill buildings, to the conditions governing the choice and to the details of construction in different materials. Designs of portions of mill buildings are worked out in the class and drafting rooms.  
Text Books:—Steel Mill Buildings—Ketchum. Mill Buildings—Tyrrell
19. *Miscellaneous Structures*:—W. J. Smither.  
Department 1, IV Year; 1 hour per week; second term.  
In this course of lectures the application of theoretical principles to the design of a variety of structures is made. Among those structures discussed are transmission line towers, elevated tanks and their supporting towers, standpipes, large pressure pipes, sewers, culverts, small highway bridges, sub-surface tanks and tall chimneys. Whenever possible the lecture work is followed up by designs in the drafting room.
20. *Railway Structures*:—C. R. Young.  
Department 1<sub>a</sub>, IV Year; 1 hour per week; first term.  
A course of lectures with exercises covering alternative bridge layouts with comparative estimates of costs, temporary and permanent trestles, tunnels, tunnels vs. bridges, buildings, turntables, snow sheds and shelters

## ARCHITECTURE

25. *History of Architecture*:—H. H. Madill, E. R. Arthur.  
Department 4, I Year, 1 hour per week; both terms  
In this course the development of architecture is traced from Pre-historic times to the Early Romanesque
- 25a. *History of Architecture*:—H. H. Madill, E. R. Arthur.  
Department 4, II Year, 1 hour per week, both terms.  
In this course the development of architecture is traced from the Romanesque Period to the present time
- 25b. *History of Architecture*:—H. H. Madill, E. R. Arthur  
Department 4, III Year; 1 hour per week; both terms.  
In this course the work of the Renaissance in Italy, France and England is taken in greater detail than was possible in the broad field covered in the previous year.
26. *Advanced Architectural Programmes*:—H. H. Madill, E. R. Arthur.  
Department 4, IV Year, 1 hour per week, both terms.  
In this course of lectures the principles underlying the planning of such large buildings as Churches, Departmental Stores, Theatres, Schools, Railway Stations, etc., are discussed in detail.



27. *Garden Design*—H. B. Dunington-Grubb.

Department 4, III Year

In this course the historical development of Garden Design is traced from earliest times, the study of sites, the influence of topography, orientation, access, etc., on the problems of design, site planning; the location of buildings, the solution of an actual problem on a typical site.

27a *Garden Design* —H. B. Dunington-Grubb.

Department 4, IV Year.

The work of the previous year is continued and a problem is set in the studio involving principles of both architectural and garden design.

28. *Elements of Architectural Form*:—E. R. Arthur.

Department 4, I Year; 1 hour per week; both terms

Lectures on the Five Orders of Architecture, their affiliated forms and other elements used in design. This course is preliminary to the lectures given in the II Year on the Theory of Architectural Planning

29. *Architectural Ornament* —H. H. Madill

Department 4, II Year, 1 hour per week; both terms.

In this course the development of Ornament is traced from the beginning through Egyptian, Assyrian, Grecian, Roman, Byzantine, Romanesque, Gothic and Renaissance styles. An attempt is made to analyze ornament of the best periods and to systematize the principles followed in form and colour

30. *History of Fine Art*.—C. W. Jefferys, F. Coates.

Department 4, III Year; 1 hour per week, both terms

The course consists of an outline of the history and development of painting and of the minor pictorial arts from the earliest time until the present day, followed by an outline of the history and development of the different eras of sculpture ranging from the primitive to the present day.

31. *Architectural Design* —H. H. Madill, E. R. Arthur.

Department 4, I Year.

This comprises work done in the Studio, including lettering, the drawing and rendering of the Orders and such elementary motives as a door, a window, etc

This is followed by a drawing in which the Classic orders and ornament taken from a particular building are arranged in the form of a composition, and by an elementary problem in design

31a. *Architectural Design*:—H. H. Madill, E. R. Arthur.

Department 4, II Year

This course is given by means of individual instruction in the studio and by criticisms of the solutions of different problems set during the year. It is in this course that the student begins the serious

study of design, continued practice in architectural drawing and rendering affords the training necessary to make of the student a proficient draughtsman.

- 31b. *Architectural Design*.—H. H. Madill, E. R. Arthur.

Department 4, III Year.

This course is given by individual instruction in the studio and by criticisms of solutions of problems set during the year. The greater part of the course is devoted to problems in design and forms a continuation of the course given in the preceding year.

- 31c. *Architectural Design*.—H. H. Madill, E. R. Arthur.

Department 4, IV Year

This course is a continuation of the work of the preceding years, being given by individual instruction in the studio and criticisms of the solution of problems set during the year

During the second term architectural working drawings of a building designed by the student are prepared in the studio.

- 31d. *Architectural Design*.—T. R. Loudon, H. H. Madill, E. R. Arthur.

Department 4, IV Year; Architectural Engineering Option

In this course the design and preparation of working drawings and structural details of work of a monumental character is carried on in the studio.

32. *Theory of Architectural Planning*.—E. R. Arthur

Department 4, II Year.

In this course special attention is given to the elements and general principles of architectural planning

33. *Architectural Composition*.—E. R. Arthur.

Department 4, III Year.

This course consists of a series of lectures on the theory of architectural design, the analysis of composition, proportion, scale, etc

34. *Architectural Aspects of Town Planning*.—E. R. Arthur.

Department 4, IV Year.

In this course of lectures the Historical Development of Town Planning is traced with particular reference to the Axial Planning of the Renaissance, Public Squares, the Grouping of Buildings and the placing of Monuments.

35. *Freehand Drawing and Water Colour Painting*.—C. W. Jefferys.

Department 4, I Year; 3 hours per week, both terms.

Drawing from still life objects Primary free hand perspective  
Primary pencil, charcoal, and pen and ink rendering.

- 35a. Department 4, II Year; 3 hours per week; both terms.

Drawing and monochrome painting from still life

Drawing from the cast.

Pencil, pen and ink, and monochrome rendering.

Primary water colour.

Drawing from landscape and natural objects.

- 35b. Department 4, III Year; 3 hours per week, both terms.  
Drawing from the cast.  
Water colour from still life. Water colour rendering.  
Drawing from landscape and natural objects  
Students who are sufficiently advanced are admitted to the Fourth  
Year Life Drawing Class.
- 35c. Department 4, IV Year; 3 hours per week; both terms.  
Water colour from still life and from landscape.  
Drawing from life.  
Water colour rendering.
36. *Modelling*.—Frederick Coates.  
Department 4, I Year, 2 hours per week; both terms.  
The Orders. Synopsis of styles.
- 36a. Department 4, II Year; 2 hours per week; both terms.  
Problems in figures and in relation to architecture.
- 36b. Department 4, III Year; 2 hours per week; both terms.  
Styles continued.  
Problems, combination of figure, ornament and architecture and  
their relative values.
- 36c. Department 4, IV Year; 2 hours per week; both terms.  
Modelling from life.  
Anatomy.  
Composition of groups.
37. *Building Measurement*.—C. H. C. Wright  
Department 4, I Year; 1 hour per week; both terms  
In this course of lectures the principles of measurements and mensuration with special reference to buildings will be discussed. With this is combined practice in measurements of existing buildings, quantities, etc.
38. *Building Materials*.—C. H. C. Wright.  
Department 4, III Year; 2 hours per week, both terms.  
The structural and aesthetic value of the various building materials.
39. *Sanitary Science*.—H. H. Madill.  
Department 4, IV Year; 1 hour per week; both terms.  
Modern plumbing, its design and installation, drainage, sewerage disposal and water supply.
40. *Heating and Ventilating*.—C. H. C. Wright.  
Department 4, IV Year; 1 hour per week; both terms.  
The design of different systems, where they should be used, heating specifications, etc.

## ASSAYING, MINING AND ORE DRESSING

The work in Mining is directed more to the development of the proper attitude of mind towards mining problems than to the teaching of actual mining methods.

The teaching of Assaying has a two-fold function. The first is to give the student a working knowledge of the practice of the art, so that he can earn money as an assayer on graduation and use this as a stepping-stone to other positions. The second is to use the assaying laboratories for the training of the students in certain important phases of Engineering methods. The size of the apparatus, the completeness of the processes in short intervals of time, the extreme accuracy of results when so desired, the relation of the extent of error to time and method, the similarity of the academic laboratory to the field laboratory, all these permit an unrivalled opportunity for driving home much broad Engineering philosophy. The assaying processes and apparatus lend themselves peculiarly well for the development of a proper perspective in regard to errors and accuracy in measurements.

The study of Ore Dressing, when accompanied by laboratory work in a well equipped ore dressing laboratory, is one of the most important of the Mining Engineering subjects. Not only is the mechanical treatment of ores a very important branch of Mining Engineering, but the mental processes involved in a study of the fundamental principles underlying the art and the compromise necessary for field practice form one of the best fields for the development of Engineering philosophy. From these points of view the ore dressing laboratory is exceptionally well equipped.

45. *Assaying*:—J. T. King.

Departments 2 and 8, III Year; 1 hour per week; first term.

A first course of lectures on the theory of fire assaying. Emphasis is laid not only on the chemical and metallurgical principles involved, but upon the errors inherent in operators as well as in methods.

Text Book:—Manual of Fire Assaying—Fulton

46. *Assaying*:—J. T. King.

Departments 2 and 8, III Year; 3 hours per week; both terms.

A laboratory course in the determination of the precious metals in ores, milling and metallurgical products. Scorification and crucible assays of ores and products, pure and impure, fluxes, slags and solutions. Buckboard practice, ores with metallics. Copper and lead by electrolysis. Students are expected to do their later assays with despatch and a reasonable degree of accuracy. Neatness of work is required.

47. *Assaying*:—J. T. King.  
Departments 2 and 8, IV Year, 1 hour lecture per week; second term.  
A continuation of course 45. Complex ores. Combination assays.  
The sampling and assay of bullion The Platinum group metals.  
Checks and corrections.
48. *Assaying* —J. T. King  
Departments 2 and 8, IV Year, 3 hours per week; second term.  
An advanced laboratory course in which some of the methods of course 47 are used.
49. *Assaying*:—J. T. King.  
Department 6, III Year; 3 hours per week; one term.  
An introductory laboratory course for Chemical Engineers. Some lecture instruction is given. An abbreviation of courses 45 and 46.
50. *Mining*:—H. E. T. Haultain and F. C. Dyer.  
Department 2, I Year; 3 hours per week; second term.  
A laboratory course, including some lectures, being an introduction to certain mining and milling machinery and methods.
51. *Mining*:—H. E. T. Haultain.  
Department 2, II Year and Department 8, III Year; 1 hour per week; first term.  
An introductory course of lectures.
52. *Mining*:—H. E. T. Haultain.  
Department 8, III Year; 1 hour per week; second term.  
An extension of No. 51.
53. *Mining*:—F. C. Dyer.  
Department 2, II Year; 3 hours per week; one term.  
Continuation of No. 50. Rock drills, sampling methods, use of explosives.
54. *Mining* —H. E. T. Haultain and F. C. Dyer.  
Department 2, III Year; 2 hours per week; second term.  
Principles of mining.
55. *Mining*:—H. E. T. Haultain.  
Department 2, IV Year; 1 hour per week; both terms.  
Special problems, estimates, reports.
56. *Mine Cost Keeping and Management*:—H. E. T. Haultain.  
Department 2, IV Year; 1 hour per week; both terms.  
One of the fundamental features that must not be lost sight of by the Mining Engineer is, that his work is designed primarily for purposes of financial profit. This course of lectures deals with

details from this point of view. The total cost of a ton of ore requiring as it does an understanding of the problems of amortization, is first dealt with in a broad way. Then are considered various problems of cost keeping, leading on to problems of time and motion study which are essential to the development of the fine points of the art in any particular mining problem. The latter part of the course deals with problems of management, the relations of members of the staff to each other, and the relations of the staff to labour.

58. *Ore Dressing*.—H. E. T. Haultain and F. C. Dyer.  
Departments 2 and 8, III Year, 1 hour per week; both terms.  
The general principles of Ore dressing.
59. *Ore Dressing*.—F. C. Dyer.  
Departments 2 and 8, III Year; 3 hours per week; both terms.  
Work with crushing machinery, principles of crushing and grading screen analyses, concentration with gravity separation apparatus, etc.
60. *Ore Dressing*.—H. E. T. Haultain and F. C. Dyer.  
Departments 2 and 8, IV Year; 1 hour per week, both terms.  
No. 58 continued, study of flow sheets and special problems.
61. *Ore Dressing*.—F. C. Dyer.  
Departments 2 and 8, IV Year, 6 continuous hours per week; one term.  
Advanced work with ore dressing appliances, ore testing and check mill runs.
62. *Ore Dressing*.—F. C. Dyer.  
Department 6k, IV Year; 1 hour per week; both terms.  
General principles of ore dressing
63. *Ore Dressing*.—F. C. Dyer.  
Department 6k, IV Year; 1 period of 6 hours per week; second term.  
Principles of sampling, crushing and grading, screen analyses, concentration with gravity separation apparatus, flotation, ore testing, etc.
64. *Physics of Ore Dressing*.—H. E. T. Haultain and F. C. Dyer.  
Department 2, III Year; 1 hour per week; both terms.  
Ore dressing methods involve a study of the laws governing the phenomena of surface tension, capillarity and colloidal solutions, in addition to those of hydrostatics and certain phases of hydraulics. This is embodied in a special course of lectures in conjunction with laboratory work in the Ore dressing laboratory

65. *Theory of Measurement*:—H. E. T. Haultain.

Department 2, II Year; 1 hour per week; one term.

This title is not an entirely suitable one for this course of lectures because it is generally applied to a study of the philosophy of extremely accurate measurements. The Mining Engineer has to continually make satisfactory use of measurements with a wide range of inaccuracy. This course of lectures deals with the philosophy underlying the causes of these errors and the practical application of such approximations. The opportunity is taken in these lectures to deal with the subject of illustrating measurements by graphs.

66. *Introductory Research*:—H. E. T. Haultain and F. C. Dyer.

Department 2, III Year; 3 hours per week; second term.

This is a laboratory course including some lectures and is a preparation for the thesis of the fourth year.

67. *Thesis*.

Department 2, IV Year; 7 hours per week; first term; 10 hours per week, second term, in continuous periods.

Thesis in this department consists mainly in reports on original work done in the laboratories. In the III year the subject "Introductory Research" paves the way for the thesis. During the month of October the student decides on the subject of his thesis in consultation with his professors. After this is decided the student uses his own initiative in the development of his work.

The thesis is divided into three parts. The first part, which is handed in during the first week in November, contains the title, a statement of what the title is meant to convey and an outline of the work that is proposed to be done. The second part is handed in during the first week of January and contains a report of progress to date and enables the professor in charge to keep in closer touch with the work. The third and final part is handed in a week before the examinations and is a report of progress to date with final conclusions. The three parts combined constitute the thesis.

68. *Vacation Letters*.

Department 2, III Year and IV Year.

These are a series of letters written during the summer vacation, dealing with various aspects of a mining engineer's work. They are intended to direct and help the student's powers of observation, analysis and criticism as well as being exercises in the art of lucid technical expression. See page 30 for instructions.

69. *Vacation Work*.

Department 2, II Year.

See page 30 for detailed instructions.

# ASTRONOMY AND GEODESY

## 71. *Astronomy, Elementary*:—C. A. Chant.

Department 1, II Year, 1 hour per week, both terms.

A course in descriptive Astronomy, explaining the ordinary astronomical terms, and describing the various celestial bodies and their motions. In the evenings opportunity will be given for identifying the stars and for observing with telescopes.

Text book:—Manual of Astronomy—C. A. Young.

## 72. *Astronomy and Geodesy*:—L. B. Stewart.

Department 1, III Year; 2 hours per week.

The course of lectures deals with the determination of time, latitude, longitude and azimuth, by methods adapted to the use of the surveyor's transit and the sextant. It is designed to fulfil the requirements of the final examinations for Ontario and Dominion Land Surveyors.

In Geodesy an account is given of the principles and methods of a secondary triangulation survey, also of the principles involved in the North-West system of survey.

Text books.—Practical Astronomy as applied to Geodesy and Navigation—Doolittle; Nautical Almanac, 1925.

## 73. *Field Work*:—L. B. Stewart, S. R. Crerar.

Department 1, III Year; about 2 hours per week, first term.

The practical work in this subject comprises observations in the field with the transit and sextant for the determination of time, latitude and azimuth by the methods described in the lectures

## 74. *Astronomy (Advanced)*:—L. B. Stewart.

Department 1, IV Year; 2 hours per week.

The lecture course in this subject comprises the theory and adjustment of the instruments used in connection with a geodetic survey; the methods of taking and reducing observations for time, longitude, latitude, and azimuth, with the precision required on such a survey; and other matters relating to these subjects.

## 75. *Geodesy and Metrology*:—L. B. Stewart.

Department 1, IV Year; 2 hours per week.

The lecture course includes a description of the methods of measuring base lines and the angles of a triangulation; the geometry of the spheroid with applications to geodetic problems; the computation of geodetic positions; the solution of large triangles on the earth's surface, and the adjustment of a triangulation; trigonometric and precise spirit levelling; the determination of the figure of the earth by arc measurements, and by the pendulum; the theory of map projections, etc.



76. *Astronomy, Geodesy and Metrology*:—L. B. Stewart.

Department 1, IV Year; about 23 hours per week

The practical work in the above subjects includes the observation of meridian transits for time and longitude determinations, and of prime vertical transits for latitude, with the astronomical transit instrument; the observation of meridian zenith distances of stars, and of azimuths at elongation for latitude, with the alt-azimuth; theodolite observations for azimuth; observations for latitude with the zenith telescope; the investigation of the constants of the instruments used, and the reduction of all observations; the measurement of a base line with the steel tape and with invar wires, and the determination of the constants of the tape; the measurement of the angles of a triangulation and the adjustment of the angles of network of triangles, etc. A portion of this work will be taken at the Summer Survey Camp. (See page 32.)

## BIOLOGY

80. *Elementary Biology*:—J. H. Faull.

Department 6, I Year; 3 hours per week, each term

An elementary laboratory course on the nature and identification of plant and animal tissues and products, with microscope practice.

81. *Elementary Biology*:—J. W. MacArthur.

Department 1<sub>b</sub>, IV Year.

A special Course of Laboratory work and demonstrations in General Biology, five hours per week, first term

82. *Hygiene and Bacteriology*:—D. T. Fraser and R. R. McClenahan.

Departments 1<sub>b</sub> and 6, IV Year.

(1) This is a course of twenty-five lectures, dealing with the principles of Hygiene and Sanitary Science and including a discussion of the facts in Bacteriology which are necessary for a proper understanding of Hygiene and Sanitary Science. The particular phases of the subject which are of importance from the standpoint of Sanitary Engineering are dealt with.

(2) This is a laboratory course of six hours per week, second term, dealing especially with the Bacteriology of water, milk and sewage.

## CHEMISTRY

85. *Elementary Chemistry*.—E. G. R. Ardagh.

Departments 1, 2, 3, 6, 7, 8, I Year; 2 hours per week, first term; 1 hour per week, second term.

A lecture course in elementary chemistry dealing with the non-metals, with experimental illustrations.

86. *Inorganic Chemistry*:—L. J. Rogers.

Department 6, I Year, 10 hours per week, both terms.

A laboratory course of quantitative experiments illustrating the use of the sensitive balance, and confirming the fundamental laws of chemistry; qualitative inorganic analysis; quantitative analysis of pure salts, inorganic preparations; molar weight determinations.

Text books:—Analytical Chemistry, Vol. II—Treadwell-Hall; Qualitative Chemical Analysis—A. A. Noyes.

87A. *Inorganic Chemistry A*.—E. G. R. Ardagh.

Departments 1, 2, 3, 6, 7 and 8, II Year, 1 hour per week, first term.

A continuation of Course 85 dealing especially with the metals

87B. *Inorganic Chemistry B*:—E. G. R. Ardagh

Departments 2, 6 and 8, II Year; 1 hour per week, second term.

A lecture course on theoretical chemistry with special reference to the metals, a continuation of Course 85.

Text book — Smith's College Chemistry—Kendall

88. *Analytical Chemistry*:—L. J. Rogers.

Departments 2, 6 and 8, III Year; 1 hour per week, both terms.

A lecture course on the principles of chemical analysis, select gravimetric and volumetric methods, technical analysis

89. *Analytical Chemistry*.—E. G. R. Ardagh.

Departments 1, 2, 3 and 7, II Year, 3 hours per week.

Laboratory practice in elementary qualitative and quantitative analysis.

Text book:—A Smaller Chemical Analysis—Newth

90. *Analytical Chemistry*:—J. W. Bain.

Department 2, II Year, 3 hours per week, both terms.

A laboratory course in the gravimetric determination of metals and acids, with elementary volumetric analysis.

Text book:—A Manual of Chemical Analysis, Qualitative and Quantitative—Newth.

91. *Analytical Chemistry*:—L. J. Rogers.

Department 8, II Year; about 12 hours per week.

A laboratory course comprising gravimetric and volumetric methods, acidimetry and alkalimetry.

Text books:—Analytical Chemistry, Vol. II—Treadwell-Hall; Qualitative Chemical Analysis—A. A. Noyes.

92. *Analytical Chemistry*:—L. J. Rogers.

Department 6, II Year, 180 hours.

A laboratory course in quantitative chemical analysis; inorganic preparations.

Text book:—Analytical Chemistry, Vol. II—Treadwell-Hall.

93. *Engineering Chemistry*.—J. W. Bain.

Departments 1, 3, 6 and 7, II Year; 1 hour per week, first term.

A lecture course consisting of a study of the industrial production and application of heat and light, and of the chemistry of fuel and the products of combustion.

94. *Industrial Chemistry*.—J. W. Bain.

Department 6, II Year; 1 hour per week, both terms.

A lecture course on the manufacture of salts, acids, alkalies and inorganic chemicals.

95. *Organic Chemistry*.—M. C. Boswell.

Departments 1, 2, 3 and 7, II Year; 1 hour per week, second term.

A lecture course in elementary organic chemistry.

96. *Organic Chemistry*.—M. C. Boswell.

Department 2, III Year; 9 hours per week, second term.

A lecture course dealing with the aliphatic compounds.

97. *Organic Chemistry*.—M. C. Boswell.

Department 6, II Year, 60 hours.

A laboratory course in organic preparations.

98. *Physical Chemistry*.—F. B. Kenrick.

Departments 6, II Year, 2 hours per week, both terms.

A course of lectures on the elements of chemical mechanics, and the theory of solutions.

99. *Analytical Chemistry*.—L. J. Rogers.

Department 2, III Year; 9 hours per week, second term.

A laboratory course on the technical analysis of ores and furnace products.

100. *Industrial Chemistry*.—E. G. R. Ardagh.

Department 6, III Year; about 10 hours per week.

A laboratory course in industrial chemistry.

101. *Analytical Chemistry and Phase Rule*.—L. J. Rogers, J. T. Burt-Gerrans.

Department 8, III Year; about 6 hours per week.

A laboratory course in analysis and phase rule.

102. *Engineering Chemistry*.—J. W. Bain, E. G. R. Ardagh.

Departments 1, 2, 3, 6, 7 and 8, III Year; 1 hour per week, both terms.

A lecture course on the application of chemistry to engineering problems, air, water, sewage, the materials of construction, explosives, etc.

103. *Industrial Chemistry*:—E. G. R. Ardagh.  
 Department 6, III Year, 1 hour per week, both terms  
 A lecture course on petroleum and its products, coal tar and its products, fats, oils, soap, sugar, starch, and gums, fermentation industries, etc
104. *Chemical Plant*:—J. W. Bain.  
 Department 6, III Year, 1 hour per week, both terms.  
 A lecture course on the machinery and plant used in chemical manufacturing.
105. *Organic Chemistry*:—M. C. Boswell.  
 Department 6, III Year; 2 hours per week, both terms.  
 A lecture course on the aromatic series.
106. *Organic Chemistry*:—M. C. Boswell.  
 Department 6, III Year, 85 hours.  
 A laboratory course in organic preparations in the aromatic series.
107. *Electrochemistry*:—W. L. Miller.  
 Departments 6, 7 and 8, III Year; Department 2, IV Year; 2 hours per week, first term.  
 A lecture course on elementary electrochemistry, illustrated by experiments.
108. *Electrochemistry*:—W. L. Miller and J. T. Burt-Gerrans.  
 Departments 6, 7 and 8, III Year; 3 hours per week, first term.  
 Department 2, IV Year.  
 A laboratory course in quantitative measurements to accompany Course 107.
109. *Inorganic Chemistry*:—J. W. Bain.  
 Department 6, IV Year; 2 hours per week, both terms.  
 A lecture course on chemical theory.
110. *Organic Chemistry*:—M. C. Boswell.  
 Department 6, IV Year; 1 hour per week, both terms.  
 A lecture course on advanced organic chemistry.
111. *Organic Chemistry*:—M. C. Boswell.  
 Department 6, IV Year.  
 A laboratory course in advanced organic chemistry
112. *Industrial Chemistry*:—J. W. Bain.  
 Department 6, IV Year; 1 hour per week, both terms.  
 A lecture course on selected subjects in chemical technology.
113. *Industrial Chemistry*:—J. W. Bain, E. G. R. Ardagh, M. C. Boswell.  
 Department 6, IV Year.  
 A laboratory course in industrial problems

114. *Electrochemistry*:—J. T. Burt-Gerrans.  
Department 6, 7 and 8, IV Year; 2 hours per week, both terms.  
An advanced lecture course on the theory of solutions and electrolysis, and the application to the practice of electro-deposition and electrolytic refining of metals. The course also includes lectures on the electric furnace with special consideration of efficiency.  
Text books:—Electrometallurgy—Borchers; Electrochemistry—Le Blanc; Electrochemistry—Luepke, The Electric Furnace—Stansfield.
115. *Electrochemistry*:—W. L. Miller and J. T. Burt-Gerrans.  
Departments 6, 7 and 8, IV Year.  
A laboratory course accompanying Course 114.
116. *Sanitary and Forensic Chemistry*:—J. W. Bain.  
Department 6, IV Year; 1 hour per week, both terms.  
A lecture course on the composition and examination of air, water and food; poisons and their detection, with accompanying laboratory course.
117. *Sanitary Chemistry*:—E. G. R. Ardagh.  
Department 1b, IV Year.  
A lecture and laboratory course on water supply, sewage disposal, ventilation, etc.

## ECONOMICS AND BUSINESS ADMINISTRATION

121. *Business*:—W. S. Ferguson.  
Departments 1, 2, 3, 6, 7, 8, I Year; 1 hour per week, second term.  
A lecture course on the principles underlying accounting and general business methods of a simple nature in order to enable the student to understand simple financial reports.
122. *Technical English*:—S. G. Bennett.  
(a) All Departments, I Year, 1 hour per week, both terms.  
A lecture course on the expression of ideas and the compilation and writing of different types of engineering reports; technical exposition; the derivation and use of technical terms, the necessity of accurate expression in professional writing, terminology; the use of graphic methods for presenting facts, abbreviations; numbers, symbols.  
(b) Department 4, II Year; 1 hour per week, both terms  
This course of lectures includes a discourse on the literature which refers either directly or indirectly to architecture and the arts. Books are reviewed and discussed in round-table talks and essays prepared for practice in expression. The preparation of specifications and contracts for the execution of construction is continued from the course in the first year, specializing in architectural types.

123. *Economics and Finance*:—C. R. Fay.  
All Departments, II Year; 1 hour per week, both terms.  
An introduction to the study of Economics. The course will deal in an elementary fashion with the following:  
(1) Scope and Method of Economics.  
(2) Theory of Value and Distribution  
(3) Structure of Industry and Social Conditions.  
(4) Money, Banking and Public Finance.  
Text Book:—Economics for the General Reader—Clay.
124. *Commercial Law*.—A. R. Clute.  
All departments, III Year; 1 hour per week, both terms. General Principles of the Law of Contracts, Principal and Agent, Partnership and Limited Companies (with special reference to the Companies Acts). General view of the following.—Negotiable Instruments, Sale of Goods, Bills of Sale and Chattel Mortgages, Suretyship and Guarantee.  
Text-Book—Stephens' Elements of Mercantile Law (6th Edition.)
125. *Engineering Economics*:—C. R. Young.  
Departments 1, 2, 3, 7, 8, IV Year; 1 hour per week, second term.  
A series of lectures on the principles by which the economic practicability of a project is judged and the comparison of competing proposals is made. Consideration is given to first cost and annual cost, methods of estimating, fixed charges and operating expenses, valuation and appraisals. Special attention is given to depreciation and the methods of providing for it, as well as to its relation to amortization. Typical numerical problems are discussed and solved.  
Text Books:—Engineering Economies—Fish; Financial Engineering—Goldman.
126. *Engineering Law*.—R. E. Laidlaw.  
Department 1, IV Year; 1 hour per week, first term.  
A course of lectures, co-ordinating Engineering practice and Law as contained in various legislation such as: The Railway Act, Municipal Act, Public Health Act, Arbitration Act, Workmen's Compensation Act, Patents, Copyrights, etc.
127. *Contracts and Specifications*:—C. R. Young.  
Departments 1, 4, 8, IV Year; 1 hour per week, second term.  
This course of lectures deals with the fundamental principles of contract and specification writing. The critical examination of typical specifications and agreements by the class, forms an essential feature of the instruction.  
Text Books—Engineering Contracts and Specifications—Johnson, Elements of Specification Writing—Kirby.

128. *Management*:—C. R. Young.

Department 1, IV Year; 1 hour per week, first term.

A series of lectures dealing with the fundamental principles upon which management is based. The possibilities of effective management are indicated and its basis is shown to exist in suitable organization, adequate equipment and smooth administration. Consideration is given to such matters as selection of personnel, essentials of effective organization for enterprises of widely different character and the art of directing a force so as to attain a desired end in an expeditious and effective manner.

Text Books:—Construction Cost Keeping and Management—Gillette and Dana; Principles of Industrial Organization—Kimball; Administration of Industrial Enterprises—Jones.

129. *Plant Management*:—G. A. Guess.

Department 8, IV Year, 1 hour per week, first term.

A course of twelve lectures dealing with some phases of labour, plant organization, smelter contracts and markets.

130. *Industrial Management*:—E. A. Allcut.

Departments 3 (Option c), 6 and 7, IV Year; 1 lecture per week, both terms.

This course includes a study of industrial organization, location, arrangement, construction and equipment of industrial plants for efficiency and economy, process routing, scheduling work, reports, methods of superintending, employment, systems of compensating labour and systems of distributing indirect expenses.

131. *Railway Economics*:—W. M. Treadgold.

Department 1, Option c, IV Year; 2 hours per week, both terms.

The object of this course is to make the student acquainted with the general principle of railroad engineering and the following branches of the subject will be discussed—economic theory of location, train resistance, effect of grade, distance and curvature, rise and fall, maintenance of way, yards and terminals, tunnels and street railway practice.

132. *Municipal Administration*:—P. Gillespie, A. T. Laing.

Department 1, Option b, IV Year; 1 hour per week, both terms.

A course of lectures dealing with civics, local improvement laws and assessments, building codes, fire control, transportation, public utilities, etc.

133. *Public Speaking*:—W. H. Greaves.

Department 1, III Year; 1 hour per week, first term.

A course on the principles of public speaking and the means of expression accompanied by practical application and training in actual speaking.

## ELECTRICITY

135. *Electricity*.—H. W. Price.

Departments 1, 2, 3, 6, 7 and 8, I Year; 2 hours per week, both terms.

A course of lectures on basic principles relating to electric circuits, magnetic circuits, instruments and apparatus in general, distribution of electrical energy, etc., illustrated largely from commercial apparatus. The point of view of this work is quantitative rather than descriptive, for it is believed that men who can solve engineering problems are most likely to grasp underlying principles.

136. *Electricity*.—W. S. Guest.

Departments 3, 6, 7 and 8, II Year; 2 hours per week, both terms.

Deals with the theory of electrical measurements, and detailed study of various methods applicable under different conditions in engineering practice to the measurement of resistance, current, potential difference, power and energy; calibration of commercial measuring instruments. The effect of choice of conditions of measurement on the accuracy of the result is considered.

137. *Electrical Laboratory*.—W. S. Guest.

Departments 3, 6, 7 and 8, II Year, 3 hours per week, both terms.

This laboratory course is closely associated with the lecture course 136 on electricity for the second year. The more important and useful methods of testing generators and circuits for electromotive force, resistance, current, grounds, etc., are practiced, often under conditions such as occur in practice. The work also includes methods of calibration of measuring instruments for voltage, current, power and energy, and certain studies of properties of incandescent lamps.

138. *Magnetism and Electricity*.—A. R. Zimmer.

Department 3, III Year; 2 hours per week, first term.

Department 7, III Year; 2 hours per week, first term; 1 hour per week, second term.

A course of lectures on theory of magnetism and magnetic circuits, theory of direct-current generators, motors, etc.

139. *Alternating Current*.—A. R. Zimmer.

Department 3, III Year; 1 hour per week, both terms.

Department 7, III Year, 1 hour per week, first term; 2 hours per week, second term.

A first course of lectures on alternating current, covering principles of measurement and leading to the analytical and graphical treatment of the simpler problems relative to alternating-current circuits and machinery.

140. *Electrical Laboratory*.—A. R. Zimmer.

Department 3, III Year; 3 hours per week; Department 7, III Year; 6 hours per week.



This laboratory course is intended to afford the student an opportunity to become familiar with principles involved in continuous-current shunt, series and compound-wound generators and motors, and, to some extent, alternating-current circuits and machinery. Other sections of the work deal with the magnetic properties of iron and steel, and study of iron losses in transformers and generators.

The course is arranged to stand in close relation to the lecture courses in the subjects of magnetism and electricity and alternating current (138, 139) for III Year, and to certain design work (141).

141. *Electrical Design*.—H. W. Price.

Department 7, III Year; 1 hour per week

A course of lectures dealing with design of electrical apparatus and machinery, accompanied by designs to be worked out in the design room

142. *Electrical Design*.—H. W. Price.

Department 7, III Year; 3 hours per week

A design room is set apart for working out designs of electrical apparatus such as transformers, generators, motors, auxiliary apparatus, etc.

Special forms and notes are employed, arranged to suit the various studies. Certain models are provided to assist where necessary.

143. *Electricity*.—H. W. Price.

Departments 1, 2 and 8, III Year; 1 hour per week, both terms.

A continuation of Course 135, First Year, adapted to the requirements of non-electrical students. It deals with problems on direct-current circuits and apparatus; magnetic circuits; power measurements; alternating current principles and machinery; transmission; power-plants, etc.

144. *Electrical Laboratory*.—H. W. Price, A. R. Zimmer.

(a) Department 1.

III Year; 3 hours per week, first term.

IV Year; Options d and e, 3 hours per week, second term.

(b) Department 2.

IV Year; 3 hours per week, first term.

(c) Department 3.

IV Year; 3 hours per week, second term.

(d) Department 6.

III Year; 3 hours per week, first term.

(e) Department 8.

III Year; 3 hours per week, both terms.

These courses are arranged to suit the requirements of the departments concerned. The experiments are planned with the idea of affording a general knowledge of circuits, power measurements, direct-current and alternating-current machinery and transmission of power.

45. *Applied Electricity*.—(a) Symbolic and Graphical Methods,  
(b) Wave Form and Transmission Line—T. R. Rosebrugh.

Department 7, IV Year, 2 hours per week

- (a) Complex quantities and their use in a c problems. Loci for current and voltage vectors for given limitations on circuit constants. Short line distribution circuit loci; approximate graphical theory of synchronous motor.
- (b) Non-sinusoidal alternating current waves, analysis of waves, forms of symmetry, three phase limitations, elimination of undesired harmonics, heating of rotary converters from combined a.c. and commutated d c waves, power, current, and voltage readings as influenced by wave form.

Long distance transmission line, principles and calculation  
Unequal lines in tandem and in parallel.

- Applied Electricity*, (c) A C. Machinery and Measurements.—H. W. Price.

Department 7, IV Year, 2 hours per week.

Polyphase alternating-current measurements of power, reactive power, apparent power, finding the indications of meters from given wiring diagrams, constructing wiring diagrams to obtain required meter indications Potential and current transformers. Meter indications with distorted wave forms Power transformers. Properties of alternators; induction motors of squirrel cage and wound-rotor types; synchronous motors; regulators, current-limiting reactors, arresters, and other general apparatus

46. *Electrical Laboratory*.—A. R. Zimmer.

Department 7, IV Year, in connection with 145, 20 hours per week.

This laboratory course involves a thorough study of principles and properties of single and polyphase circuits and apparatus. Both vector and analytical methods are applied to the solution of problems based on tests made on laboratory machines.

The work deals mainly with constant-voltage and constant-current transformers, single and polyphase alternators, synchronous motors, rotary converters, induction and single phase commutating motors, transmission line, etc. The work does not consist only of factory tests, but is designed to lead the student to apply theory to practice as illustrated in the apparatus under test, with a view to an exact understanding of methods and an appreciation of limitations under many conditions. Free use is made of the oscillograph as a necessary device for "seeing" conditions under investigation The best commercial measuring instruments are available.

147. *Radiotelegraphy*:—T. R. Rosebrugh.

Department 7. Option *r*, IV Year, in connection with 148; 2 hours per week.

Natural oscillations of simple and simply coupled circuits. Action of C.W. on circuits of the most general character. Radiation of antennas. Theory of modulation in radiotelephony. Energy control and transformation by vacuum tubes.

148. *Radiotelegraph Laboratory*:—W. C. C. Duncan.

Department 7. Option *r*, IV Year, in connection with 147; 9 hours per week.

The work in this laboratory covers the principles and the technique of measurements at radio frequencies. This includes measurements of wave length, resonance, coupled circuits, inductance, capacity, energy distribution, resistance, etc., at radio frequencies.

Considerable work is also done with the three electrode vacuum tube and its uses in radio and audio-frequency circuits.

## ENGINEERING DRAWING AND DESCRIPTIVE GEOMETRY

160. *Descriptive Geometry*:—J. R. Cockburn.

Departments 1, 2, 3, 6, 7 and 8, I Year; 1 hour per week; both terms

This course of lectures deals chiefly with the principles of orthographic and oblique projections and the application of such principles to the solutions of problems relating to straight lines and planes.

161. *Descriptive Geometry*:—J. R. Cockburn.

Department 4, I Year; 1 hour per week; both terms

This course of lectures deals chiefly with the principles of orthographic and oblique projections and the application of such principles to the solution of problems relating to straight lines and planes, special reference being made to the determination of shades and shadows.

162. *Descriptive Geometry*:—J. R. Cockburn.

Departments 1, 2, 3 and 7, II Year, 1 hour per week, both terms.

This course of lectures is a continuation of the work taken in the first year with the following additions: Problems relating to curved surfaces, principles of shades, shadows and perspective.

163. *Descriptive Geometry*:—J. R. Cockburn.

Department 4, II Year, 1 hour per week, both terms.

This course of lectures is a continuation of the work taken in the First Year with the addition of problems relating to curved surfaces, shades, shadows and perspective.

164. *Descriptive Geometry*:—J. R. Cockburn.  
Department 1, III Year; 1 hour per week, first term.  
This course of lectures deals with spherical projections, the principles of mapmaking, and the graphical solution of spherical triangles.
165. *Descriptive Geometry*:—J. R. Cockburn.  
Department 4, III Year; 1 hour per week, first term.  
Advanced work in shades, shadows and perspective.
166. *Engineering Drawing*:—J. R. Cockburn.  
Departments 1, 2, 3, 7 and 8, I Year, 11 hours per week, first term; 18 hours per week, second term.  
Copying from the flat, lettering, topography; graphical solution of problems in statics; problems in descriptive geometry, relating to both orthographic and oblique projections; the plotting of original surveys, measured drawings.
167. *Engineering Drawing*.—J. R. Cockburn.  
Department 4, I Year.  
Lettering, the graphical solution of problems in statics, problems in descriptive geometry, relating to both orthographic and oblique projections; measured drawings.
168. *Engineering Drawing*:—J. R. Cockburn.  
Department 6, I Year; 4 hours per week, both terms  
Copying from the flat, lettering, graphical solution of problems in statics, problems in descriptive geometry.
169. *Engineering Drawing*.—J. R. Cockburn.  
Departments 1 and 2, II Year. Department 1, 4½ hours per week, first term; 13½ hours per week, second term. Department 2, 3 hours per week first term; 12 hours per week, second term.  
Colouring and shading as applied to both topographical and construction drawings; problems in descriptive geometry relating to solids bounded by curved surfaces; principles of shades, shadows and perspective; solution of problems in optics and strength of materials; measured drawings; elementary design.
170. *Engineering Drawing*:—J. R. Cockburn.  
Departments 3 and 7, II Year; Department 3, 13 hours per week, first term; 11 hours per week second term; Department 7, 12 hours per week, both terms.  
Coloring and shading as applied to construction drawings; problems in descriptive geometry relating to solids bounded by curved surfaces, principles of shades, shadows and perspective, solution of problems in optics, theory of mechanism and strength of materials; measured drawings; elementary design.

171. *Engineering Drawing*.—J. R. Cockburn  
Department 4, II Year.  
Principles of shades, shadows and perspective, problems in descriptive geometry relating to solids bound by curved surfaces; solution of problems in strength of materials.
172. *Engineering Drawing*.—J. R. Cockburn.  
Department 6, II Years; 7 hours per week, first term, 3 hours per week, second term.  
Department 8, II Year; 3 hours per week, first term; 6 hours per week, second term.  
(Same as Department 3 with the exception that Dept. 6 has no descriptive geometry)
173. *Engineering Drawing*.—J. R. Cockburn.  
Department 1, III Year, 15 hours per week first term, 12 hours per week, second term.  
Principles of mapmaking, spherical projection, problems in theory of construction; original design of various structures.
174. *Engineering Drawing*.—J. R. Cockburn.  
Department 2, III Year; 9 hours per week, first term.  
Problems in theory of construction, original design.
175. *Engineering Drawing*.—J. R. Cockburn, W. J. T. Wright.  
Department 4, III Year.  
Problems in shades, shadows and perspective.
177. *Engineering Drawing*.—J. R. Cockburn.  
Departments 3, 6 and 8, III Year; Department 3, 9 hours per week, first term; Department 6, 6 hours per week, first term.  
Problems in design dealing with the theory of structures.
178. *Structural Design Drawing*.—W. J. Smither.  
Department 1, IV Year; 22 hours per week, both terms.  
Problems in structural design.
179. *Structural Design Drawing*.—W. J. Smither  
Department 1b, IV Year; 5 hours per week, second term.  
Department 1d, IV Year; 4 hours per week, first term; 8 hours per week, second term.  
Department 1e, IV Year, 6 hours per week, both terms.  
Problems in structural design
180. *Structural Design Drawing*.—W. J. Smither.  
Department 3, IV Year, 3 hours per week, both terms.  
Problems in mill building design.

181. *Structural Design Drawing*.—W J Smither.  
Department 3, IV Year, Option (b); 3 hours per week, both terms.  
Problems in reinforced concrete design
182. *Engineering Drawing* —J. R. Cockburn.  
Department 8, III Year, 3 hours per week, first term  
Plotting metallurgical flow sheets

## ENGINEERING PHYSICS

185. *Illuminating Engineering and Optics*:—G. R. Anderson.  
Departments 1, 3, 6, 7, I Year  
Rectilinear propagation of light, illumination, photometry, light standards. Distribution of light by reflectors and diffusers, general and selective absorption, economic values of artificial lights. Illumination calculations.  
Laws of reflection and refraction, theory of optical instruments.  
Light considered as wave motion, dispersion, spectrum analysis, colour phenomena, polarization.  
Lectures and laboratory work, both terms.
186. *Hydrostatics*:—G. R. Anderson.  
Departments 1, 3, 6, 7, II Year.  
Laws of fluid pressure and application to machines. Density of solids, and fluids, theory of flotation.  
Lectures and laboratory work. Spring term
187. *Heat*:—G. R. Anderson.  
Departments 1, II Year.  
Generation and propagation of heat General and industrial thermometry, calorimetry and pyrometry. Linear and cubical expansion, gas laws. Specific heat of solids, liquids and gases, latent heat of fusion and vaporization. Mechanical equivalent of heat Carnot cycle.  
Lecture and laboratory work Fall term.
188. *Photography*:—G. R. Anderson.  
Department 1, II Year.  
The camera and its adjustments, lenses, shutters, screens. Plates for various purposes, films, prevention of halation Lighting, exposure, development. Paper of various kinds, printing, enlargement and reduction, blue printing and allied processes Record photography, photogrammetry and photo-surveying. Photography in colour.  
Lectures Fall term, and laboratory work both terms.

189. *Illumination*.—G. R. Anderson.  
Department 4, II Year.  
Principles of interior and street illumination. Artificial lighting of public and private buildings, etc.
190. *Acoustics*.—G. R. Anderson.  
Department 4, III Year; Department 7, IV Year.  
Wave motion, propagation, reflection and transmission of sounds. Laws of vibrating strings, pipes and forks. Velocity of sounds. Musical scales. Absorption of sound by various substances, use of deadening material in buildings. Amount of reverberation permissible and desirable in public buildings. Lectures and laboratory work.
191. *Photographic Surveying*.—G. R. Anderson.  
Department 1a, IV Year; 1 hour lecture and 2 hours laboratory, first term.  
This course presupposes a general knowledge of photographic processes as given in the second year. Treatment of a photograph as a perspective drawing from which plan and elevation to scale may be obtained under certain conditions. The intersection method of photographic surveying, its advantages and limitations. The stereoscopic method with its advantages and disadvantages. Method of plotting. Accuracy of results.

## GEOLOGY

193. *Field Work*.—E. S. Moore.  
Department 2, III Year; one week preceding the opening of the first term.
194. *Pleistocene Geology and Physiography*.—A. MacLean.  
Department 2, IV Year; 1 hour per week, both terms.  
*Pleistocene Geology*.—Lectures on the formation and distribution of the drift deposits of North America, with brief references to other regions. Glacial, Interglacial, and Postglacial beds are described, changes of climate are discussed with their probable causes, and the economic features of the clays, sands, and gravels are pointed out. A weekly excursion is made during October and November to points of interest near Toronto, which is the centre of the most important development of the Pleistocene in America.

*Physiography*.—A course of lectures on the surface forms of the earth, with the geological factors which have produced them. The broad features of the earth, its plains, tablelands, hills, valleys, mountains, oceans, rivers, and lakes are discussed in a general way, methods of topographical surveying and mapping are referred to, and the chief physiographic areas of Canada are described.

195. *Elementary Geology*.—W. A. Parks.  
 Departments 1, 2, II Year; 2 hours per week, second term.  
 This course deals chiefly with historical geology with special reference to Canadian formations.  
 Works of Reference:—Introduction to Geology—Scott; Elementary Geology—Coleman and Parks.
196. *Geology and Ore Deposits*.—A. MacLean.  
 Department 8, II Year; 2 hours per week, both terms.  
 Lectures and laboratory work on historical, structural, and economic geology, designed to familiarize the student with the more important principles, facts, and terms of general geology.  
 Works of Reference:—As in Course 195.
197. *Engineering Geology*.—A. MacLean.  
 Department 1, III Year; 1 hour per week, both terms.  
 This course deals with the application to engineering of dynamic, structural, and economic geology.  
 Works of Reference:—Engineering Geology—Ries and Watson.
198. *Dynamic and Structural Geology*.—A. MacLean.  
 Department 2, III Year; 1 hour per week, first term  
 Lectures on geological forces and their effects. Particular attention is given to those aspects of the subject which apply in mining.
199. *Precambrian Geology*.—E. S. Moore.  
 Department 2, IV Year, 2 hours per week, first term.  
 Lectures on the Precambrian formations of Canada—their rocks, distribution, relationships, and economic features. Briefer accounts are given of similar formations in the United States and elsewhere.  
 Works of Reference.—Reports of the Geological Survey of Canada and of the Ontario Department of Mines; Reports of the United States Geological Survey.
200. *Mining Geology*.—E. S. Moore.  
 Department 2, IV Year; 2 hours per week, second term.  
 A course of lectures on geological problems associated with mining, typical mining regions in Canada, the United States, and elsewhere being discussed from the geological side.



Works of Reference.—Mineral Industry; Ore Deposits of United States and Canada—Kemp, and the works mentioned under Course 199.

201. *Geological Excursions*.—The Staff in Geology.  
Department 2, IV Year  
During October and November weekly trips will be made to points of interest near Toronto.
202. *Economic Geology*.—E. S. Moore.  
Department 2, III Year.  
(a) *Ore Deposits*: 1 hour per week, both terms.  
Discussion of the origin and classification of ore deposits, the mode of occurrence of the chief ores, and statistics of production. Special attention is given to the metals mined in Canada.  
(b) *Economic Geology of the Non-metals*: 2 hours per week, second term.  
Lectures on the origin and mode of occurrence of the valuable non-metallic substances—coal, oil, building stone, gypsum, cement materials, etc.  
Works of Reference.—Economic Geology—Ries, General Economic Geology—Emmons, Ore Magmas—Spurr, Coal—Moore, Practical Oil Geology—Hager.
203. *Economic Geology*.—E. S. Moore.  
Department 2, III Year, 2 hours per week, second term.  
Laboratory work on ores, manner of occurrence, vein structure, etc., also the examination and construction of geological maps and sections of typical mining regions
204. *Special Geology*.—A. MacLean.  
Department 1, Option e, IV Year, 1 hour lecture and 1½ hour laboratory work per week, second term.  
A lecture and laboratory course on superficial geology, physiographic control, water geology, etc.  
Works of Reference.—Political and Commercial Geology—J. E. Spurr.

#### HYDRAULICS

205. *Hydraulics*.—R. W. Angus  
Departments 1, 2, 3, 6, 7, III Year, 2 hours per week, both terms.  
This is a course of lectures in hydraulics devoted to the development and discussion of formulae relating to the flow of water in pipes, the measurement of discharge by various methods, such as orifices and weirs, the conditions of flow obtaining in open channels, artificial and natural, and in pipes flowing partially full, together with other kindred subjects

The object of this course is to provide the student with a good working knowledge of the fundamental principle of hydraulics, such as is useful in practical work, and is necessary to the intelligent investigation of more advanced problems, such as the design of water supply, sewerage and irrigation system, and water power plants.

206. *Hydraulic Laboratory*.—R. W. Angus, R. Taylor.

Departments 1, 3, III Year; one 3 hour period per week, second term.  
Departments 6, 7, III Year; 4 periods of 3 hours each.

The work in this course is intended to illustrate the lecture course given in hydraulics and to give the student some working acquaintance with the formulae met with in practice. Experiments are made to determine the coefficients for orifices of the various types used in practice and for a weir. The results of these experiments are used in measuring the discharge in subsequent experiments on meters and for the determination of hydraulic resistances in various cases of flow in pipes. The complete course illustrates very fully the application of the course of lectures to actual cases.

207. *Hydraulics*.—R. W. Angus.

Departments 1, 3, 7, IV Year, 1 lecture per week, both terms

A course of lectures dealing with the various problems of unsteady flow such as occurs in power lines, penstocks, etc. Much of the work is done by the process of arithmetic integration, and the lecture work is supplemented by problems solved by the students in the work rooms, the time for which is included in course 209. Surges, water hammer, stream flow data, etc., are discussed.

The problems of collection of water for power purposes, use of the mass curve, rainfall and evaporation, turbine governing, etc., are also treated.

208. *Hydraulics*.—R. W. Angus.

Departments 1, 3, 7, IV Year; 2 lectures per week, both terms.

The most important question considered and to which most of the lectures are devoted is the theory of turbines and centrifugal pumps, the effect of the design on the speed, discharge and efficiency being fully taken up. The course includes the selection of turbines and pumps for given service intakes, draft tubes and all matters connected with hydraulic power plants.

Text Book.—Water Power Engineering—Mead

209. *Hydraulics*.—R. W. Angus, R. Taylor.

Departments 1, 3, 7, IV Year; about 10 hours per week in 3 hour periods, both terms; Department 3, Option (c), first term only.

A laboratory course devoted to experimental work on turbines of various types and centrifugal and turbine pumps and other similar devices. This experimental work is arranged to illustrate the lectures on turbine and pump design. The experiments are made on two large turbine pumps used in the laboratory supply, as well as on apparatus specially designed for instruction. Various methods of measuring water-power and the efficiency of machines are also given. A list of the equipment now available, and which is used in this course, is given at the end of the Calendar.

210. *Hydraulic Laboratory*:—R. Taylor.

Departments 2, 8, IV Year; 3 hours per week, second term.

A laboratory course of experiments on orifices, weirs and meters.

211. *Hydraulics*:—R. Taylor.

Department 1<sub>b</sub>, 1<sub>a</sub>, IV Year, one hour lecture per week, first term.

A laboratory course of 3 hours per week, first term, on measurement of water, flow in open channels and on pumps.

212. *Hydraulics*:—R. Taylor.

Department 3, IV Year, Option (c); one hour lecture per week, both terms

A lecture course on pumps and other hydraulic machinery.

## HEAT ENGINES

216. *Steam Engines*:—E. A. Allcut.

Departments 3 and 7, II Year, 1 lecture per week, both terms.

Departments 2 and 8, II Year; 1 lecture per week, first term.

This course of lectures includes a discussion of the history and development of the steam engine and the functioning of its various component parts. Special attention is given to the theory and design of valves and valve operating mechanisms.

217. *Thermodynamics*:—E. A. Allcut.

Departments 3, 6 and 7, III Year, 2 lectures per week, both terms.

In this lecture course the laws of heat are used to develop the characteristic equation for a perfect gas and the use of thermal lines on the pressure-volume diagram. The properties of Carnot's cycle are then considered, followed by application of these principles to the hot-air engine, internal combustion engine and air compressor. A consideration of the properties of vapours and their application to the steam engine cycle concludes the course.

218. *Heat Engines*:—E. A. Allcut.

Department 3, III Year, 2 lectures per week, both terms

Departments 7 and 8, III Year; 1 lecture per week, both terms.

The course in Heat Engines is intended to supplement the general lecture course in Thermodynamics by showing the practical

applications of the laws discussed therein. A general consideration of the laws of combustion and heat transmission is followed by their application to boiler practice. Details of steam, gas and oil engines are described and the lectures are arranged as far as possible to supplement the information obtained in the laboratory course 219.

219. *Thermodynamics and Mechanical Laboratory*.—R. W. Angus, E. A. Allcut, H. A. Tuttle.

Department 3, III Year; one 3 hour period per week, both terms.

Department 7, III Year, 2 hours per week, first term; 1½ hours per week, second term. Time to be in three-hour periods.

This laboratory course is designed to assist in a clearer understanding of thermodynamics, machine design and mechanics of machinery. The work in thermodynamics consists in the setting of slide valves, indicating engines measuring the brake horse-power, simple engine and boiler tests and the testing of gas and gasoline engines under various conditions. The mechanical laboratory work deals with the efficiency of belts as well as of several machines of simple construction. An examination of lubricating oils is also made by means of well-known methods. Experiments are also made on the balancing of reciprocating and rotating masses.

220. *Thermodynamics*.—E. A. Allcut.

Departments 3 and 7, IV Year, 2 lectures per week, both terms.

This is a continuation of course 217, the general thermodynamic theory being studied from the conception of the thermodynamic surface. The theory of the flow of gases and vapours through orifices, nozzles and pipes is then discussed and its application to the various forms of turbines is outlined. Following this, the principles of refrigeration, binary fluid engines and internal combustion are dealt with.

221. *Heat Engines*.—E. A. Allcut.

Departments 3 and 7, IV Year; 1 lecture per week, both terms

This course is a continuation of the lectures on heat engines given in the Third Year, with special application to the steam power plant. The causes of the various losses occurring in steam engines and the considerations that influence them are studied in detail. Special attention is given to condensing plants, consumption records and other factors upon which the efficiency of a power plant depends.

222. *Thermodynamics*.—R. W. Angus, E. A. Allcut, H. A. Tuttle.

Departments 3 and 7, IV Year; about 9½ hours per week, in 3 hour periods.

The work in this year is a continuation and extension of the work covered in the third year laboratory course. Careful tests are made of engines of various types, such as simple, tandem and

cross-compound steam engines, steam turbine; refrigerating machine, injectors and steam pumps, etc.; and an application is made of Hirn's analysis and the entropy diagram to the results obtained. A complete set of experiments is made on each machine and the result plotted so as to show clearly to the student the effect of various alterations in the adjustment of the engine on the resulting efficiency.

Several modern gas and gasoline engines give ample opportunity for the study of this type of engine, and facilities are provided for sampling the gas supply and exhaust.

Two experimental stacks and three boilers enable results to be obtained on boiler efficiency and chimney draft.

223. *Thermodynamics*—E. A. Allcut.

Department 1, III Year; 1 lecture per week, both terms.

Departments 2 and 8, IV Year, 1 lecture per week, both terms.

The general principles of thermodynamics, the properties of a perfect gas and their application to the Carnot cycle are first studied. This is followed by a consideration of the air compressor cycle, some details of air compressor operation and the theory of the flow of air through pipes and orifices. The properties of vapours and the principles of steam engine operation are also discussed.

224. *Thermodynamic Laboratory*:—H. A. Tuttle.

Departments 1 and 6, III Year; 7 three-hour periods; Departments 2 and 8, IV Year, 3 hours per week, first term.

A course of experiments with steam and gas engines, compressed air, etc.

225. *Motive Power*:—R. W. Angus.

Department 1, Option e, IV Year; one hour per week, both terms.

A course of lectures covering boiler capacity, locomotive horse-power, tractive effort, etc., necessary to carry specified trains over different conditions of roadbed.

226. *Heating and Ventilation*:—H. A. Tuttle.

Department 3, IV Year; Option (c); one hour per week, both terms.

This course is designed to give a working acquaintance with the essential engineering principles underlying the practice of heating and ventilation work.

227. *Refrigeration*.—H. A. Tuttle.

Department 3, IV Year; Option (c), one hour per week, both terms.

A course covering the principles underlying mechanical refrigeration, physical properties of different refrigerants, and a study of the various standard types of refrigerating machines and systems.

228. *Thermodynamics Laboratory*:—H. A. Tuttle.

Department 3, IV Year, Option (c); three hours per week, both terms.

A laboratory course on heating, ventilation, refrigeration, etc.

## MACHINERY

230. *Theory of Mechanism*.—J. H. Parkin.

Departments 2, 3 and 7, II Year; lectures 2 hours per week; problems 1½ hours per week, both terms.

This course of lectures treats of the elementary construction of machines and of the motions of the various parts. Methods of determining linear and angular velocities, methods for the solution of elementary problems involving forces and methods for the determination of the mechanical efficiency of machines are discussed. Velocity diagrams, crank effort and torque diagrams are plotted. Cams, toothed gearing and various types and applications of trains of gearing are considered.

Applications of the methods described are made to various machines including engines, machine tools, link motions, etc., and the lecture work is followed up by the solution of numerous examples in the drafting room.

Text Book:—*Theory of Machines*—Angus.

231. *Mechanics of Machinery*.—J. H. Parkin.

Departments 3 and 7, III Year; 1 hour per work, both terms.

This course is devoted to a consideration of the speed regulation and balancing of machines, and comprises lectures on the theory of various forms of governors, kinetic energy of machines and determination of speed fluctuations, the proper weight of fly-wheel, acceleration and inertia effects, and balancing.

The methods of analysis employed are those developed in course 230.

Text Book —*Theory of Machines*—Angus.

232. *Elementary Machine Design*.—J. H. Parkin.

Departments 3, 6 and 7, II Year; 1 hour per week, both terms.

This is a preparatory course intended to familiarize the student with the different shop methods and processes, casting, forging, machining, etc., used in the production of machine parts, to enable him to make proper provision in the design of such parts to facilitate their production.

In addition, the various standards, machine and pipe threads, tapers, pipe fittings, etc., are described and mechanical drafting room practice explained.

Tolerances, limits, fits and gauges are discussed.

The design of simple machine fastenings and parts is taken up and examples worked out in the drafting room.

233. *Machine Design* —J. H. Parkin and W. G. McIntosh.

Departments 3 and 7, III Year; 2 lectures per week, both terms.

The design work averages 7 hours per week for Department 3, and 4 hours per week for Department 7, the periods to be of not less than 2 hours' duration.

The lectures in this course deal with the design of various machine elements, including shafting, bearings (journal, thrust, ball and roller), belts, pulleys, fly-wheels, clutches, springs, machine frames, etc.

The problems worked out in the drafting room are planned to include the design of all of the above and with a view to developing the student's judgment and sense of proportion in design.

Text Book:—Machine Design—Leutwiler.

234 *Machine Design*—J. H. Parkin and W. G. McIntosh.

Department 6, IV Year, Department 8, III Year, 1 lecture per week, both terms

The design work occupies 3 hours per week for the second term only.

The lectures in this course deal with the design of various machine elements, particularly those likely to be met with in Chemical and Metallurgical plants

The problems worked out in the drafting room are designed to give the student training in the general lay-out of shafting and plant machinery, as well as in the design of simple parts for chemical and metallurgical apparatus.

Text Book.—Machine Design—Leutwiler.

235 *Advanced Machine Design*—J. H. Parkin and W. G. McIntosh.

Department 3, IV Year, 2 lectures per week in the first term, 1 lecture per week in the second term.

The design work averages  $6\frac{1}{2}$  hours per week for Option (a), 6 hours per week for Option (b) and 7 hours per week for Option (c), the periods to be of not less than 2 hours' duration.

The work of this course is devoted to the design of complete machines with the object of giving the student practice not only in the design of various details, but also in working in the various elements into a machine of smooth and harmonious design. The machines chosen as examples for design involve as many new machine elements as possible in order to broaden the training of the student.

Text Book:—Machine Design—Leutwiler.

## MATHEMATICS

236. *Calculus*:—M. A. Mackenzie and J. L. Synge.

All Departments, I Year; 2 hours per week, each term.

Treatment of limits with special reference to those pertaining to exponentials and logarithms. Derivation of the fundamental formulae of the differential and integral calculus, with early application to simple problems concerning graphs, areas, volumes, lengths, etc.

- 237 *Calculus*.—M. A. Mackenzie and J. L. Synge.  
Departments 1, 3, 6 and 7, II Year; 1 hour per week, both terms.  
Continuation of course 236. The elementary theory reviewed and extended. Special attention to applications with problems in Engineering mostly in view.
- 238 *Analytical Geometry*—S. Beatty.  
All Departments, I Year; 1 hour per week, first term, 2 hours per week, second term.  
The course in Elementary Analytical Geometry covers the more familiar propositions in connection with the straight line, circle, parabola, ellipse and hyperbola. The subject is treated so as to illustrate the general methods of analytical geometry
239. *Trigonometry, Spherical*.—L. B. Stewart.  
Department 1, II Year, 1 hour per week, first term  
A course of lectures includes the derivation of formulæ and their application to the solution of triangles and to practical problems.  
Text Book:—Spherical Trigonometry—Todhunter and Leatham.
240. *Least Squares, Method of*.—L. B. Stewart.  
Department 1, III Year, 1 hour per week, second term.  
The course of lectures includes: The general principles of probability, the law of error, direct measurements of equal and different weights; mean square and probable errors; indirect measurements; conditioned observations; applications to empirical constants and formulæ, etc.  
Text book:—Least Squares—Merriman.

## METALLURGY

241. *Elementary Metallurgy*.—G. A. Guess.  
Departments 1, 2, 3, 6 and 8, II Year; 1 hour per week, second term.  
A course of about 12 lectures on furnace metallurgy and present practice, with special reference to iron and steel.
242. *Fuels and Combustion*.—G. A. Guess.  
Department 8, II Year; 1 hour per week, both terms.  
A lecture course dealing with fuels, their use, preparation, calorific value and combustion.
- 243 *Metallurgy*.—G. A. Guess.  
Departments 2, 6, III Year; 1 hour per week, both terms.  
Fuels, temperature of combustion, specific heat, conductivity and problems thereon; chimneys, furnaces, refractories, outline of furnace metallurgy and hydro-metallurgy.



244. *Physical Metallurgy*:—O. W. Ellis.  
Departments 2, 3, 6 and 7, III Year; 2 hours per week, second term.  
The physical properties and structure of iron and steel and the more common alloys.
245. *Metallurgy*:—G. A. Guess, J. E. Toomer.  
Department 8, III Year; 2 hours per week, first term; 1 hour per week, second term.  
A lecture course on General Metallurgy accompanied by 3 hours laboratory per week, first term, and 6 continuous hours per week second term.
246. *Physical Metallurgy*:—O. W. Ellis.  
Department 8, III Year; 1 hour per week, both terms.  
Changes of phase and of state, pyrometry, preparation of alloys, miscibility of metals, binary, ternary and complex alloys, the use of the microscope, with 3 hours laboratory per week, first term.
247. *Metallurgy*:—G. A. Guess, J. E. Toomer  
Departments 2 and 6, IV Year; 1 hour lecture per week, both terms; 6 continuous hours laboratory per week, second term.  
General metallurgy and metallurgical problems.
248. *Metallurgy Problems*:—G. A. Guess, J. E. Toomer.  
Department 8, IV Year; 2 hours lecture and 4 hours laboratory, both terms.  
Metallurgical book-keeping, balance sheets, thermal balance sheets, methods and processes.
249. *Metallurgy*:—G. A. Guess.  
Department 8, IV Year; 1 hour per week, both terms.  
Critical reading and discussion of papers and articles, describing metallurgical processes or dealing with plant arrangement and construction. Metallurgical flow sheets of typical plants.
250. *Physical Metallurgy*:—O. W. Ellis.  
Departments 6 and 8, IV Year; 1 hour lecture and 3 hours laboratory per week, both terms.
251. *Metallography*:—O. W. Ellis.  
Department 2, IV Year.  
A laboratory course of 3 hours per week, second term.
252. *Physical Metallurgy*:—O. W. Ellis.  
Department 1, IV Year; 1 hour per week both terms.  
The physical properties of metals and alloys used in Civil Engineering practice—specifications.

253. *Heat Treatment of Iron and Steel*:—O. W. Ellis.  
Department 3, IV Year, 1 lecture per week, both terms.  
Heat treatment of iron and steel, case carburizing, case hardening  
and malleablizing.

## MINERALOGY

255. *Elementary Mineralogy*:—J. E. Thomson.  
Department 2, I Year, 2 hours per week, first term.  
After introducing the student to the chief chemical, physical, and  
crystallographic characteristics of minerals, the course becomes  
descriptive and deals with about one hundred of the minerals most  
important from the industrial or scientific point of view.  
Text Book:—Study of Minerals and Rocks—Rogers
256. *Mineralogy*:—J. E. Thomson.  
Departments 6 and 8, I Year; 3 hours per week, one term.  
Introduction to determination of minerals by inspection and physical  
tests  
Text Book.—Mineral Tables—Eakle
257. *Primary Mineralogy*.—A. L. Parsons.  
Department 1, II Year, 2 hours per week, first term  
A very brief introduction to the study of minerals and rocks.  
Text books:—Study of Minerals and Rocks—Rogers; Hand-Book  
of Rocks—Kemp.
258. *Mineralogy*.—J. E. Thomson.  
Department 2, I Year, 1 hour per week, first term, 3 hours per week,  
second term  
Determination of minerals by inspection and by means of physical  
tests; introduction to blow-pipe practice.  
Text books:—Mineral Tables—Eakle, Determinative Mineralogy—  
Lewis
259. *Mineralogy*:—A. L. Parsons, J. E. Thomson.  
Department 1, II Year; 1 hour per week, first term, 2 hours per  
week, second term  
Determination of minerals by inspection and by means of physical  
tests; study of common rock types and their identification.  
Text books:—Mineral Tables—Eakle; Handbook of Rocks—Kemp.
260. *Elementary Petrography*:—T. L. Walker  
Department 2, II Year; 1 hour per week.  
A course of lectures and laboratory work introducing the student to  
the macroscopic study of rocks  
Text-books —Handbook of Rocks—Kemp

261. *Mineralogy*:—J. E. Thomson.

Department 2, II Year; 2 hours per week.

Determination of minerals by means of the blow-pipe and physical properties.

Text books:—Mineral Tables—Eakle; Determinative Mineralogy—Lewis.

262. *General Petrography*:—A. L. Parsons.

Department 2, III Year; 1 hour per week.

Study of the chief rock-forming minerals and of some phases of petrography not covered in the course of the previous year.

Text Books:—Minerals in Rock-Sections—Luquer; Petrology for Students—Harker.

263. *Petrography*:—T. L. Walker.

Department 2, III Year; 2 hours per week, both terms.

Study of the chief rock-forming minerals, of rocks in thin sections and in hand specimens.

Text books:—Petrology for Students—Harker; Minerals in Rock Sections—Luquer.

## MODERN LANGUAGES

266. *French*:—J. H. Cameron, Miss J. C. Laing, L. A. Bibet.

Required in Department 4, I and II Years; 2 hours per week, both terms; III Year, 1 hour per week, both terms.

(a) Practice in translation of selected texts bearing on some phase of architectural study.

(b) A course in Conversation to encourage the student to acquire a speaking knowledge of the language.

267. *German*:—G. H. Needler, B. Fairley.

Required in Department 6, all years; 1 hour per week, both terms.

An elementary course intended to train the student in the translation of scientific journals and treatises.

268. *Spanish*.—M. A. Buchanan.

Departments 6k, IV Year; 8, II Year, 1 hour per week, both terms.

An introduction to Spanish grammar, pronunciation and practice in reading Engineering Spanish

## PHYSICAL TRAINING

269. *Physical Training*:—G. D. Porter, D. M. Barton

Required in all departments, I and II Years, and optional in the III and IV Years. Students in the I and II Years must be medically examined at the beginning of the session and are directed to the form of physical work most suitable to their requirements.

Those classified as A1 may elect to take any form of competitive athletics during the season in which that form of sport is in progress.

Military training in the C.O.T.C. constitutes an option in Physical Training (see page 123).

## SURVEYING

**270. *Surveying*—S. R. Crerar.**

Departments 1, 2, 3, 7 and 8, I Year; 1 hour per week, both terms

The lecture course includes the general principles; surveying with the chain, the compass and chain and the transit and chain, and level, the applications of trigonometry to inaccessible heights and distances; mensuration of surfaces, co-ordinate surveying, division of land, etc.

Text books:—Plane Surveying—Tracy, Theory and Practice of Surveying—Johnston and Smith; Elementary Surveying—Breed and Hosmer.

**271. *Field Work*—S. R. Crerar, J. W. Melson.**

Departments 1, 2, 3, 7 and 8, I Year; 5 hours per week, first term.

This course comprises testing chains; practice in chaining; a complete survey of a piece of land with the chain and transit; keeping of field notes; the use of the transit and compass in surveying closed figures and traverse lines and in ranging straight lines; plotting by latitudes and departures, and otherwise computing areas. Instrumental work with level, including roadway improvement.

**272. *Surveying*—W. M. Treadgold, E. W. Banting.**

Departments 1 and 2, II Year, 1 hour per week, both terms.

This course of lectures takes up in detail, simple, reverse and compound curves as applied to railroad surveying. It also includes stadia, plane table and photographic surveying as applied to topographic work, and the main features of mine and hydrographic surveying.

Text books:—Henck, Searles, Allen (Field books for Engineers) Theory and Practice of Surveying—Johnston and Smith; Surveying—Breed and Hosmer.

**273. *Field Work*—W. M. Treadgold, E. W. Banting.**

Department 1, II Year; 9 hours per week, first term.

Department 2, II Year; 6 hours per week, first term.

This course of instruction embraces all adjustments of the transit and level, minor problems in triangulation and traversing—levelling and plane table practice.

274. *Surveying and Levelling*:—W. M. Treadgold.

Department 1, III Year; 1 hour per week, both terms.

This course of lectures takes up the work of the railroad engineer on construction, including profiles, cross sectioning, computation of volume of earthwork, overhaul, transition curves, laying out turnouts, frogs and switches, etc

Also a discussion of trigonometric and barometric levelling.

Text books:—Field Engineering—Searles; Railroad Curves and Earth-works—Allen.

275. *Survey Camp*:—W. M. Treadgold, S. R. Crerar, E. W. Banting, J. W. Melson.

Departments 1 and 2, III Year.

This course includes:

- (a) Secondary Triangulation and Base Line Measurements.
- (b) Stadia, Plane Table and Boundary Traverses.
- (c) Highway and Railway Location.
- (d) Cross Sectioning and Computation of Earthwork.
- (e) Stream Gauging and Discharge Measurements.
- (f) Hydrographic Surveying.
- (g) Photographic and Micrometer work.
- (h) Stadia and Plane Table Topography.
- (i) Mine Surveying.
- (j) Observations for Time, Azimuth and Latitude. This work is taken at Gull Lake Camp. See page 32.

276. *Railroad Location and Design*:—W. M. Treadgold.

Department 1, Option "c," IV Year; 1 hour lecture per week, both terms, about 8 hours per week, both terms, in the drafting room.

This work will consist of an original survey for a railroad some one or two miles in length, the work to be carried out according to the most modern methods of location. Upon the completion of the field work, the complete survey will be plotted and a line adjusted to it. This will be staked out, profiles taken and the computation made of the earthwork and the preparation of overhaul diagram compiled for determination of haul and borrow. In the second term the design of track work, yards and practical problems will be taken up and special problems assigned.

### ADDITIONAL FOURTH YEAR COURSES

280. *Sanitary Engineering*.—Peter Gillespie.  
Department 1<sub>b</sub>, IV Year; 1 hour lecture per week, both terms; 3 hours laboratory, first term, and 6 hours, second term.  
Consideration is given to the problems of water supply, sewerage and sewage disposal as viewed by the engineer. Some practice in the design of works from assumed data is afforded. Excursions to places of interest are arranged from time to time.  
Reference Books:—Public Water Supplies—Turneaure and Russell; American Sewerage Practice—Metcalf and Eddy, 3 vols.
281. *Highway Engineering*.—A. T. Laing.  
Department 1<sub>b</sub>, IV Year, 1 hour lecture and 3 hours laboratory per week, both terms.  
This course of instruction deals with the design, construction and maintenance of public highways and street pavements, also with the properties of the materials employed. Accompanying the course of lectures is a laboratory course dealing with the various bituminous and non-bituminous materials of construction. Excursions to places of interest are arranged for during the fall term.
282. *Municipal Seminar*.—P. Gillespie, A. T. Laing.  
Department 1<sub>b</sub>, IV Year; 3 hours per week, both terms  
This time is devoted to reading, essay writing and discussion of problems relating to highways, transportation, town planning, sanitation and kindred subjects.
283. *Zymology*.—H B Speakman.  
A study of the phenomena of fermentation and their industrial applications.

### THESIS

285. *Thesis*.  
Required in all Departments, IV Year, with the exception of Department 4, Architectural Design Option.  
Each student is required to prepare a thesis of between six thousand and seven thousand words on a subject approved by Council.  
See circular of information.

### OUTLINE OF VACATION WORK

286. *Construction Notes*.  
II Year. Departments 1, 2, 3, 4, 6, 7  
The construction notes required consist of neat and complete dimensioned sketches in pencil of any structures, machines or plants which may be of interest. Any object chosen should be represented and dimensioned in such a manner that it could be completely constructed from the notes as the only available information (See page 474.)

From students in Department 2, who have been actually engaged during the summer with Government or other approved geological survey parties, geological field notes will be accepted in lieu of construction notes.

287. *Vacation Work*.—C. H. C. Wright, H. H. Madill, E. R. Arthur.  
Department 4, III Year.

Each student is required to submit a set of rendered measured drawings of existing buildings or portions of buildings, the building first to be approved by the head of the Department, who will also decide the number and size of the drawings to be made. The record of measurements must be preserved in a notebook which will be submitted with the final drawings.

- 288 *Vacation Work*.—C. H. C. Wright, C. W. Jefferys.  
Department 4, IV Year.

Each student is required to submit a set of at least six outdoor sketches in water colour, pen and ink, or pencil. The minimum size for each sheet will be 9"×12". Of these sketches, three will be of an architectural character.

## SCHOOL OF ENGINEERING RESEARCH

A School of Engineering Research, within the Faculty of Applied Science and Engineering, was established in the Spring of 1917 at the suggestion of the late Dean Ellis.

The School is under the direct supervision of a Committee of Management composed of fifteen Members of the Faculty Council. To this Committee is entrusted the selection of researches to be undertaken under the auspices of the School, and the disposition of funds conducting them.

The School was organized chiefly for the training of graduates in methods of research, and for the carrying out of investigations. These latter may be problems relating to specific industries or raw materials and having a specific end in view, or general problems having to do with fundamental principles.

A number of research assistants are appointed annually in the various departments of the Faculty to carry on the work of research under direction of members of the staff. The facilities of the School are also open to graduates who desire to penetrate more deeply into particular phases of experimental work, or to undertake investigations either suggested by members of the staff or arising from their own work since graduation.

Address communications to the Secretary—Professor Maitland Boswell, Ph.D.

## ADVANCED COURSE IN HYDRO-ELECTRIC POWER

In view of the importance of Hydro-Electric power in Canada, further facilities are offered to those graduates who wish to supplement the present extensive undergraduate courses bearing upon this subject. Graduate studies may be pursued by candidates for the Degree of Master of Applied Science as soon as desired after graduation.

To those returning after satisfactory experience in some approved phase of Hydro-Electric work, somewhat more specialized courses may be given than are possible with very recent graduates. The Engineering Alumni Association of the University has expressed its willingness and desire to assist such candidates in obtaining suitable employment to fit them for these courses of study, but such courses are available only to those with the proper undergraduate preparation.

Graduates who may wish to avail themselves of the arrangements proposed are advised to communicate with the Dean.

It should be noted that candidates for post-graduate degrees register with the Secretary of the School of Graduate Studies. For further particulars see Calendar of the School of Graduate Studies and page 106 of this Calendar."

MASTER OF APPLIED SCIENCE DEGREE  
MASTER OF ARCHITECTURE DEGREE

- 1A. A candidate for the degree of M.A.Sc. shall hold the degree of B.A.Sc. of this University or a degree from some other University recognized as equivalent by the Council of the School of Graduate Studies.
- 1B. A candidate for the degree of Master of Architecture should hold the degree of Bachelor of Architecture or the degree of Bachelor of Applied Science in Architecture of this University or a degree from some other University recognized as equivalent by the Council of the School of Graduate Studies.
2. He shall register with the Secretary of the School of Graduate Studies at the beginning of the academic year.
3. Not later than November 1 of his academic year, he shall submit to the Secretary for acceptance by the School of Graduate Studies the title of his proposed thesis as approved by the department concerned.



- 4 Not later than April 30th of his academic year, he shall present evidence to the Council of the School of Graduate Studies that he has spent not less than one academic year of the department concerned as a student enrolled in one of the following departments on a course of study approved by the department:—Civil Engineering, Mining Engineering, Mechanical Engineering, Architecture, Chemical Engineering, Electrical Engineering, Metallurgical Engineering.
5. Not later than April 30th of his academic year, evidence that the candidate has satisfactorily met all the requirements of the department with regard to thesis and to such examinations as the department shall require, shall be forwarded to the Council of the School of Graduate of Studies through the sub-committee administering the regulations governing the degrees of M.A.Sc. and M.Arch

### PROFESSIONAL DEGREES

The attention of graduates is directed to the following regulations respecting professional degrees.

The following degrees have been established: Civil Engineer (C.E.), Mining Engineer (M.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Chem.E.), Metallurgical Engineer (Met.E.), subject to the following regulations:

1. A candidate for one of the said degrees shall hold the diploma of the School of Practical Science or of the Faculty of Applied Science and Engineering or the degree of Bachelor of Applied Science.
2. He shall have spent at least three years after receiving the diploma or the degree in the actual practice of the branch of engineering wherein he is a candidate for a degree.
3. Intervals of non-employment or of employment in other branches of engineering shall not be included in the above three years. It shall not be necessary that the several periods requisite to make up the said three years be consecutive.
4. Satisfactory evidence shall be submitted to the University examiners as to the nature and length of the candidate's professional experience for the purpose of clauses 2 and 3

The Examiners may satisfy themselves by oral or written examinations in regard to the candidate's experience and competence.

5. The candidate shall prepare an original thesis on some engineering subject in the branch in which he wishes a degree, the said thesis to be accompanied by all necessary descriptions, details, drawings, bills of quantities, specifications and estimates.

- The candidates may be required at the option of the Examiners to undergo an examination in the subject of this thesis.
6. Notice in writing shall be sent to the Secretary not later than the first day of November, informing him of the degree to which the candidate wishes to proceed and of the title of his proposed thesis for the approval of the Examiners.
  7. The evidence under clause 4, and the thesis, with accompanying papers, described in clause 5, shall be sent to the Secretary not later than the first day of April.
  8. The candidate shall be required to present himself for examination in the month of April at such time as may be arranged by the Examiners.
  9. The fee for any one of the said degrees shall be twenty dollars, and shall be paid to the Bursar not later than the first day of April.
  10. The thesis, drawings, and other papers submitted under clause 7 shall become the property of the University.
  11. Nothing in this statute shall prevent any candidate from receiving more than one of the said degrees, provided he has the necessary qualifications for each degree. An interval of three years must elapse between the granting of any two degrees under this statute.
  12. All communications must be addressed to the Secretary of the School of Graduate Studies.

#### CERTIFICATE FOR HIGH SCHOOL ASSISTANT

The Calendar of the Ontario College of Education provides for the admission of the holder of a degree in Science to the Course for a High School Assistant's certificate. The regulation requires that the applicant shall submit with his application:

"His certificate of graduation as Bachelor or Master of Arts, Bachelor or Master of Science, Bachelor of Commerce, Bachelor of Agriculture, or Bachelor of Applied Science, from a British University, after the regular university course approved by the Minister of Education as to entrance requirements and as to content of the undergraduate courses. Each applicant must have Upper School or Honour Matriculation standing in English and History and Mathematics or the equivalent of such standing."

## LABORATORY EQUIPMENT

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### THERMODYNAMIC AND MECHANICAL LABORATORY

The University in 1919 completed the erection of a large, well-equipped building for the accommodation of the steam, gas, mechanical and hydraulic laboratories. A more complete description of the laboratories has been published elsewhere, so that the present description is only intended to give the main features.

The part of the building set apart for thermodynamics and other mechanical work is the ground floor of a room 60 ft. x 155 ft. This room is lighted entirely from the roof in a very perfect way. A part of the space 40 ft. wide running the entire length of 155 feet is served by a 3 ton travelling crane and contains the following equipment:

50 h.p. Brown engine with separate jackets on both heads and barrel of cylinder.

Two-stage Rand air compressor having compound steam cylinders, each fitted with Meyer cut-off gear. The low pressure air cylinder has Corliss inlet gear.

30 h.p. high-speed Leonard tandem compound engine with shaft governor.

15 h.p. high-speed McEwan engine.

75 h.p. two-line compound Willans engine.

25 h.p. General Electric steam turbine.

Two 15 h.p. Leonard engines with different types of valves, which are used for valve setting.

There are also two surface condensers with air pumps so arranged that any engine in the laboratory may be made to exhaust into the atmosphere through an open heater or into one of the condensers, the change from one arrangement to the other being accomplished in a few minutes without the aid of valves.

The laboratory further contains:

A 3 ton York refrigerating machine with tanks

An Amsler transmission dynamometer.

Apparatus for testing injectors and steam pumps.

Numerous other pieces of apparatus and instruments.

The work on internal combustion engines and producers is performed on the following:

18 h.p. Canada suction gas producer.

14 h.p. National gas engine arranged for various compressions and points of ignition.

10 h.p. Fielding and Platt engine for city gas or coal oil, having various adjustments

8 h.p. Otto gas engine.

25 h.p. Allen semi-Diesel engine.

25 h.p. tractor gasoline engine.

200 h.p. Spiaguc electric dynamometer.

Various accessories to above machines.

Steam for the laboratory is supplied by two 50 h.p. and one 100 h.p. Babcock and Wilcox boilers, the latter having an internal superheater. These boilers are located in a separate boiler room. They are used for experimental work only and are fitted up for testing. The gases pass up through two independent chimneys, and these have been arranged so that the draft and other conditions in the chimney at any point of its height may be examined.

In smaller work-rooms off the main laboratory are placed belt and oil testing machines, apparatus for testing the efficiency of gears and machines, and for experiments in the balancing of machinery.

## HYDRAULIC LABORATORY

The hydraulic laboratory occupies two floors each 40 feet x 112 feet, which are well lighted by large windows on the side and end.

The water for the experimental work is pumped through the various pieces of apparatus from a well by means of two turbine pumping units, both of which are driven by a Belliss and Morcom compound engine of 125 h.p. running at a speed of 525 revs. per minute. Both engine and pumps have been installed with a view to using them in experimental work as well as for supply of water for other apparatus used in the laboratory.

The pumping units are capable of delivering one cubic foot of water per second against heads of 250 feet and 300 feet respectively. These units are designed and connected up so that they may be run in series giving the above discharge at 550 feet head, or they may be run in parallel giving double the discharge at a lower head. Each pumping unit consists of two two-stage pumps mounted on a common base and driven by a single pulley, and the construction and piping are such that each two-stage pump may be driven separately or that all may be driven at once, discharging separately one cubic foot per second at about 125 feet head through each of four independent pipes, or else the pumps may be run in series or in parallel. The scheme is thus well adapted to laboratory work, and under the heads used on reaction turbines about six cubic feet per second may be obtained.

In addition to this there is an electrically driven pump capable of delivering six cubic feet per second at a head of sixty-five feet and which is most helpful in turbine testing. Attention is called to the special turbine testing flume described below.

The laboratory further contains a large vertical steel tank 5½ feet diameter by 34 feet with arrangements for the attachment of nozzles

and other mouthpieces, etc. Connections are also arranged for reaction turbines, the tank acting as a reservoir.

The discharge from the turbines or nozzles is measured in a weir tank nearly 6 feet wide and 21 feet long, containing a contracted weir  $4\frac{1}{2}$  feet wide. This weir may be calibrated by two weighing tanks, each having a capacity of about 240 cubic feet.

There are three reaction turbines and two impulse wheels all ready for experiment, the power being measured by brakes and the water by weir or orifices. Amongst the reaction turbines may be mentioned the one designed and built by Escher Wyss & Co., specially for the laboratory.

A new and specially designed turbine testing flume has recently been added to the laboratory, the machinery for which has been largely furnished through the kindness of the Dominion Engineering Works, Montreal, and Wm. Cramp and Sons, Philadelphia. This flume is supplied with water by a Moody spiral pump of twelve cubic feet per second capacity and at present there are two turbines, one of the propeller type, and also two special draft tubes and more will be added. This provides an excellent opportunity for experiment and research.

Smaller orifice and weir tanks, each about  $3 \times 3 \times 12$  feet with necessary measuring tanks, are arranged for instruction in coefficients of various kinds and practice with weirs and orifices.

A Venturi meter and other meters, also an hydraulic ram and similar devices are available for testing, and good facilities have been arranged for investigating friction and other properties of pipes and fire hose.

For special investigations on turbine and centrifugal pumps, other pumps in addition to those already described have been arranged.

The basement of the laboratory contains an open trough 5 feet wide, about 110 feet long, with a large weir at one end. It is intended to use this trough for experiments on the flow in open channels, for measurements of large discharges by means of the weir, and for experiments with current meters and Pitot tubes.

Numerous pieces of smaller apparatus, together with all instruments required, have also been provided, and the laboratory equipment is believed to be very complete.

## AERODYNAMIC LABORATORY

The Aerodynamic Laboratory is located in a separate special building. The Laboratory is fully equipped with an improved 4-ft. Royal Aircraft Establishment type wind channel, aerodynamic balance, micromanometers and other necessary instruments.

Air speeds of 80 feet per second can be secured in a stream of great steadiness and uniformity and higher speeds with some sacrifice in steadiness.

The work done in the Laboratory includes the investigation of problems in aerodynamics, tests of air craft components, and complete machines, rating of meters, ventilators, radiators, etc., and the study of the effect of wind pressure on structures, chimneys, etc.

### DONATIONS TO THE THERMODYNAMIC AND HYDRAULIC LABORATORIES

The following donations to the equipment of the laboratories have been made through the kindness of those mentioned.

50 h p. Wheeler Surface Condenser, presented by Mr. F. M. Wheeler, New York.

Blake Feed Pump, presented by the manufacturers.

6-inch New American Turbine, presented by Wm. Kennedy & Sons, Owen Sound, Ont.

Two Crown Water Meters, presented by the National Meter Co., New York, through Mr. M. Warnock, Toronto.

Rock Drill, presented by Sullivan Machinery Co., New York, through Mr. A. E. Blackwood, '95.

Marine Gasoline Engine, presented by Canadian Fairbanks Co., Montreal.

Two engines with different types of valve, presented by Messrs. E. Leonard & Sons, London, Ont.

Bundy trap from American Radiator Co., through Messrs Russell & Gifford.

Dunham steam trap from C. A. Dunham Co.

Sectional models of valves from American Radiator Co.

Sectional model Mason Reducing Valve by Russell & Gifford.

Tanks, etc., by John Inglis Co.

Pressure Fan from Sheldons Ltd., Galt.

Model water turbine test runner from Wellman, Seaver Morgan Co., Cleveland, O

Equipment for new turbine testing flume from Dominion Engineering Works, Montreal.

Multi-stage pump from Goldie and McCulloch, Galt.

Hytor vacuum pump complete with motor, etc., from Nash Engineering Co., Norwalk, Conn., through A. S. Leitch and Co, Toronto.

Model water turbine runners from Allis-Chalmers Co, Milwaukee.

Section of Trident water meter from Neptune Meter Co., Toronto.

In addition to the above, other firms have materially assisted by offering apparatus at or below cost price, among whom may be specially mentioned, The Canadian Rand Drill Co, Sherbrooke, Quebec.

The following machines are gifts from the Royal Air Force:

One S.E.5 Scout.

One Avro Training Biplane.

Liberty Aeroplane Motor 400 h.p.

200 B. h.p. Siddeley Deasey Aero Engine

120 h.p. Beardmore Aero Engine.

Curtis Engine (Sectional).  
Hispano Suiza Aero Engine.  
80 h.p. Le Rhone Rotary Engine  
Clerget Rotary Engine.  
Gnome Monosoupape Engine.  
Admiralty Rotary Engine 150 h.p.  
Models of Engines, etc., and numerous spare parts.

## ENGINEERING PHYSICS LABORATORIES

### *Illuminating Engineering.*

The laboratories for this work are equipped with 3 metre optical benches for instruction in the fundamental theory of optical instruments. There is also a general equipment consisting of one or more of the following: telescopes, field glasses, microscopes, spectrometers, sextants, range finders, polarizing instruments, etc. For work in illumination there is provided: a 3 metre precision photometer with integrating mirrors and rotator, integrating spheres, radial distribution photometer, portable illuminometers, spectro-photometer, gas light photometer, life racks, etc.

### *Hydrostatic Laboratory.*

The Hydrostatic Laboratory is supplied with various types of hydro-meters, hydrostatic balances, pumps, gauges, etc.

### *Heat Laboratory.*

The Heat Laboratory is equipped with a full supply of colorimeters and accessories for determination of latent and specific heat, expansion apparatus, air thermometer, apparatus for verification of Boyle's law and pressure and boiling curve, and for determination of the absolute expansion of mercury, Callendar's apparatus for determination of the mechanical equivalent of heat. Calorimeter for the determination of the value of solid, liquid and gaseous fuels.

### *Acoustical Laboratory.*

The Acoustical Laboratory is provided with sonometer, siren, forks ordinary and electric, Lissajous' and Melde's apparatus, organ pipes of various forms, manometric flame apparatus and a special equipment for work in architectural acoustics consisting of torsion chronograph, electro-pneumatic wind chest and standardized organ pipes and other accessories.

The following donations have been received for work in Illuminating Engineering, and are gratefully acknowledged:

Sample board of electric fittings from the Harvey-Hubbell Co., Toronto;

Sample board and easel, showing types of condulets, from the Crouse-Hinds Co., Toronto,

Demonstration sets to show construction of incandescent electric light bulbs, from the Canadian Sunbeam Lamp Co., Toronto;

Lamp rack illustrating various types of incandescent electric bulbs, from the Canadian Westinghouse Co., Hamilton;  
Sample board illustrating types of industrial reflectors and elexit and other fittings, Benjamin Electric Co., Toronto.  
Gasoline Mantle Lamps, Coleman Lamp Co., Toronto.

## PHOTOGRAPHIC AND PROJECTION LABORATORIES

The Photographic Laboratory contains a supply of small cameras for the use of students, enlarging cameras, printers, blue printing machine and the necessary dark rooms.

This Department also carries on a photographic and projection service for all Faculties and Departments of the University. The equipment for this work consists of cameras for making photographs up to full plate size, enlargers, photo-micrographic apparatus, motion picture cameras for both gross and micro work, with the necessary developing and printing machines, a rotary blue print machine, a photostat, etc.

For projection service there is a motion picture projector and a number of projection lanterns for service in any University Building.

## ELECTRICAL LABORATORIES

The Department of Electrical Engineering is located in the Electrical Building. The accommodation includes quarters for staff, library, lecture rooms, laboratories, stores, and shop for repairs and construction.

Services.—Three-wire direct-current, 110 kw., from the University power house, automatically regulated at our end for constant voltage of desired value at our main switchboard Three-phase, 60 cycles, 60 k.v.a., 115 volts, automatically regulated as to voltage and frequency. Three-phase, 25 cycles, 30 k.v.a., automatically regulated as to voltage and frequency. Every laboratory has all three services available at convenient places. There are three main boards, one for each floor. A system of special trunk lines between boards, and tree systems on each floor, enable easy arrangement of any desired special connections from any laboratory to any other.

Alternating current laboratory.—Area 26 x 110 ft., service sets 60 and 25 cycles, Tirrill regulators. Two 60-cycle and two 25-cycle, 15 k.v.a. motor-generator sets; converters; various motors, squirrel cage and wound rotor induction types, repulsion and other single-phase types, unity power factor motor, polyphase motor with variable speed shunt characteristics and speed range of 4 to 1; transformers, single and three-phase; constant-current transformers with load of series arc lamps; lamp racks, reactors, condensers, brakes, etc.; oscillographs; indicating, graphic, recording, and demand meters of the best makes; all arranged to facilitate a very general line of experimental work.



Direct current laboratory.—40 kw. 230 to 115 volt motor generator set with Tirrill regulator for special tests. Numerous 5 kw. to 10 kw. motor-generator sets; shunt, series, compound motors; special interpole machines; loading racks, dynamometers, rheostats, numerous meters of first quality, etc., for any sort of study.

Measurements Laboratory.—26 x 110 ft. Fitted with very flexible storage battery service which can be connected to any desired working place; d.c. three-wire service, also 60 and 25-cycle three-phase everywhere; galvanometers, resistance boxes, bridges, shunts, potentiometers, standard cells, bond testers, ductor, megger, apparatus for measuring low resistances, artificial lines for fault measurements, condensers, inductances, rails, cables, voltmeters, ammeters, wattmeters, dynamometers, etc., for general work on a great variety of measurements.

High voltage laboratory.—For various lines of study with voltages up to 200,000 volts. Flexible and safe provision for control.

Materials laboratories.—One specially fitted for general work on conducting materials, one for magnetic materials, one for dielectric materials.

Radio laboratory.—Adapted for the measurement of various quantities of interest in this work, including the strength of incoming signals. One single conductor aerial 1,000 ft. long, one multi-conductor aerial 120 ft. long.

Standardizing laboratories.—One students' calibration room for direct-current meters, another for alternating-current meters. A standards room, constant temperature, for master standards of voltage, resistance, current, power, etc.

Research laboratories.—Four rooms set apart for this work, in combination with facilities of the other laboratories.

Design laboratory.—Arranged for calculation work on apparatus selected to illustrate essential principles.

## CHEMICAL LABORATORIES

The Chemical laboratories are situated in the western half of the Chemistry and Mining building, on the first and second floors. The rooms are large and well lighted, and are supplied with the usual modern equipment.

The first and second year laboratory for qualitative work has accommodation for 112 students, each working space being supplied with water, gas and fume cupboard. The laboratory for quantitative analysis will accommodate 48 students, and is supplied with commodious fume cupboards and all necessary apparatus. A laboratory with working places for 36 is provided for the students engaged in the study of technical chemistry, it is equipped with appliances for the preparation and testing of chemical products. Laboratories for fourth year students with accommodation for twenty workers has been fitted up. Each of these laboratories has its own balance room adjoining furnished with instruments from the best makers and adapted to the particular objects in view.

In addition there are rooms set apart for research, for gas analysis, and a specially constructed fireproof laboratory for combustion, crucible and bomb furnaces. Each of these laboratories is supplied with apparatus of the most approved design, providing excellent facilities for the prosecution of work in analytical and technical chemistry.

A start has been made in equipping in a room in the basement, set apart for the purpose, as a laboratory for carrying on chemical operations on a small factory scale.

### ELECTROCHEMICAL LABORATORIES

The Electrochemical laboratories, which are situated in the Chemistry and Mining building, are provided with special facilities for electrolytic work, including a large storage battery and electroplating dynamo with tanks as well as a good set of apparatus and electrical measuring instruments. The experimental work on electric furnaces is carried out in a large furnace room in the basement, occupied jointly by this Department and the Department of Metallurgy. The equipment for this purpose comprises a 120 KW, 110 volt generator supplying direct current through a switchboard, rheostats, circuit-breaker and instruments to a set of distributing bus-bars, and a 200 KV-a transformer stepping down from 2200 volts to 30-120 volts in 3 and 6 volt steps, which supplies alternating current at 25 cycles. There is a complete set of A C. instruments, circuit-breakers, oil-switches, relays, automatic regulating winches, etc., and a Northrup high frequency furnace with its transformer is also installed.

### ASSAYING LABORATORIES

These are situated in the west end of the basement in the Mining Building. They consist of five rooms, in addition to a library for study and an instructor's room. The East laboratory, 17 x 47 feet, and the West laboratory, 28 x 37 feet, are equipped with coal, oil, gas, and electric furnaces of various design. Each room has a fume cupboard, and the necessary equipment for the wet work in connection with assaying. Accommodation for twenty-four students at a time is provided, by individual work desks, each supplied with a balance, weights, fluxes, tools, drawers and lockers. Common to both laboratories is the balance room which has a cement table on brick piers to support the bead balances. These are illustrative of the types met in practice. Adjoining the West laboratory is a research room. A store-room adjoins the East laboratory where fluxes, clay ware and extra parts are kept. In the instructor's room are stored a large number of ores and bullion, obtained chiefly from typical mining districts and metallurgical plants, for class use. The preparation of ores is done in the Milling building, where crushers, pulverizers and sampling devices are available. A special laboratory sampler has been constructed for the purpose of giving samples for the student's assays, of indisputable

similarity, thus confining variations in results to the students' work. Other apparatus includes Gussé-Haultain stationary electrolytic outfits, King rotating electrolytic apparatus, microscopes, optical resistance and thermocouple pyrometers, hand and foot cupel machines, grinding plates and screens.

### MINING AND ORE DRESSING LABORATORY

A detached building 72 ft. x 70 ft. contains the Mining and Ore dressing equipment. It is heated, lighted and supplied with power from the central plant. It is divided into several parts, the larger being 72 ft x 53 ft. by 22 ft. high.

In this room is a 5-stamp battery with amalgamation plates, Wilfley table, Deister Plat-o table, Deister slime table, buddle, and classifiers of sufficient size to make tests on lots of from one to ten tons.

In addition are a set of small Wilfley tables, two 3-compartment jigs, a 2 ft. x 3 ft tube mill, a small experimental tube mill, agitators, small classifiers and other testing apparatus for experimenting on the falling rates of ore particles, slime settling, surface tension and flotation processes. These include a Case machine, a K. and K. machine, a Ruth machine, a Callow cell, etc. Water is supplied from a tank in the roof. The machinery is all motor driven.

One portion of the room is devoted to rock drills of various types and other mining apparatus.

The other part of the building, 72 ft. x 17 ft., is divided into several rooms and contains a Hadfield's Gyratory Crusher, 16 in. x 12 in. Rolls, small crushers, screening machine, and sampling apparatus. The crushers are driven by a 30 h.p. motor in another room.

The other rooms contain a Wetherill magnetic separator, screen sets, a smithing equipment, workshop and storage for small lots of ore. The larger part of the ore supply is accommodated in bins outside the building.

The plant throughout is intended mainly for teaching and experimental purposes.

There has recently been added apparatus especially designed for research work in various phases of rock crushing and grinding:—Ball Mills with plate glass ends for the study of ball paths; a small Ball and Rod Mill on ball bearings with dynamometer; a set of high grade miniature Rolls in ball bearings with integrating dynamometer.

### METALLURGICAL LABORATORIES

This laboratory, in the East end of the Mining building, occupies about 3,800 sq. ft. on the basement floor and the same space immediately above on the ground floor. The basement floor is divided into one large furnace room, a small hydrometallurgical room and two store-rooms. The furnace

room contains a motor driven Connorsville blower, several gas fired furnaces, two small blast furnaces, and a small 6 hearth Wedge roasting furnace. The larger electric furnaces of the Department of Electrochemistry are in this room. Some are supplied with direct current, others with A.C. from a 200 K.V.A. transformer. A system of flues, with hoods over all the furnaces, leads through a Cottrell precipitator of the Rathbun type taking current at 50,000 volts, to a stack through which gases are pulled by a fan in the attic.

The hydro-metallurgical room in addition to apparatus for leaching tests contains several natural draft furnaces, a large Hoskins resistance furnace and a 113 lb. drop hammer. There are also tanks for electrolytic refining and precipitation of metals.

The upper floor is divided into laboratories, store rooms and offices. The laboratories are: 1. Metallurgical analysis; 2. Heating treatment and pyrometry; 3. Grinding, polishing and etching; 4. Metallographic room with an adjoining dark room.

In the laboratory for metallurgical analysis the student is given some training in mill and smelter methods of analysis. It is well equipped for this work.

In the heat treatment and pyrometry laboratory are a number of tube furnaces of different sizes, a Leeds & Northrup transformation point indicator with furnace, double thermocouple and twin galvanometer, a Leeds & Northrup potentiometer pyrometer, a disappearing filament pyrometer, and many thermocouples for use with galvanometer or potentiometer. For grinding and polishing there is provided two motor driven emery wheels and a set of 3 motor driven horizontal polishing plates.

The metallographic room is equipped with one horizontal photo micrographic instrument made by Pellin Paris, one vertical photo micrographic apparatus by Bausch & Lomb and two other Bausch & Lomb metallographic microscopes.

There are also a Pellin instrument for the determination of critical points by photography according to the Saladin method and a Leeds & Northrup type "K" precision potentiometer, which is also used for the determination of critical points.

## MECHANICS OF MATERIALS LABORATORY

This laboratory is available for the scientific and commercial testing of materials of construction such as iron, steel, timber, concrete and masonry.

It is supplied with the following:

An Emery 50-ton hydraulic machine, built by Wm. Sellers & Co., of Philadelphia, for making tests in tension and compression.

A 100-ton screw power machine, built by Riehle Bros, Philadelphia. It is designed for making tests in tension, compression, shearing and cross-breaking, and will take in posts 12 feet long and beams up to 18 feet in length.

A Riehle 10-ton screw power universal testing machine.

A Riehle 50-ton screw power universal testing machine.

A Riehle 50-ton hydraulic testing machine intended especially for testing concrete blocks.

A Riehle standard brick rattler.

A 15-ton single lever-machine, built by J. Buckton & Co., Leeds, England.

A torsion machine, built by Tinius Olsen & Co., Philadelphia, for testing the strength and elasticity of shafting. This machine will twist shafts up to 16 feet in length and 2 inches in diameter

A hand power torsion machine of simple mechanical construction, specially designed for the testing of short shafts of a maximum diameter of one inch.

A Riehle transverse testing machine of 5,000 pounds capacity, adapted to specimens up to 48 inches in length.

A Riehle compressometer, with spherical seat attachment for the adjustment of specimens having slightly non-parallel faces. This compressometer will receive specimens up to 10 inches in length.

An Olsen compression micrometer of standard type.

A 20,000 pound Olsen, hand power, wire testing machine, specially fitted for testing wooden columns with both fixed and pivoted ends.

An Olsen combined tension and cantilever type impact testing machine.

An Olsen, 20,000 pound, hand power testing machine especially adapted for testing long columns.

An Olsen, 200 pound capacity, textile testing machine.

A Riehle abrasion cylinder, built to the standard required by the National Brickmaker's Association, adopted in 1901.

A Berry strain-gauge for spans of 8 inches and 8 inches.

A Nalder dividing engine. This may be used either for the precise division of scales or for the calibration of instruments intended for refined measurements.

A Brinell hardness testing machine.

A Shore scleroscope for testing hardness.

A large number of extensometers of the usual degree of precision. These include the Bauschinger, Martens, Unwin, Ames, Riehle, Johnson, Henning (recording) and other types. In addition there are the usual scales, micrometers, telescopes and reflectors, voltmeters for the determination of metallic contact, and such other appliances as are necessary in the making of precise measurements.

The shop is equipped with a number of high-class machine tools specially fitted for reducing the specimens to the requisite shapes and dimensions with a minimum of hand labour. It is also supplied with the necessary appliances for making ordinary repairs and for making apparatus for special experiment and original investigation.

## HIGHWAY LABORATORY

### ROAD METALS

This laboratory is equipped for carrying out investigations in the various materials employed in highway construction and maintenance, and comprises the following:

Page impact machine for testing the toughness of road materials.

Diamond core drill for preparing specimens for the toughness test.

Deval abrasion machine for testing the resistance to wear of road materials.

Cementation testing apparatus (Page type) for determining cementing properties of road materials.

Jaw crusher (Mitchell type) for crushing rock for various tests.

Power driven agitator with sieves for the mechanical analysis of sand, gravel and crushed rock.

Dorry hardness testing machine for determining the hardness of rock used in road construction.

### BITUMENS

This laboratory is designed for the investigation of the physical rather than the chemical properties of bitumens used in road construction and maintenance. The equipment consists of an extractor for separating bitumens and aggregates, an Engler viscosimeter, a penetration apparatus as well as appliances for determining melting point, volatilization, specific gravity, ductility, etc.

## LABORATORY OF ONTARIO BOARD OF HEALTH

Through the courtesy of the Secretary of the Provincial Board of Health for Ontario the facilities of the excellently equipped laboratory which the Board maintains at Stanley Park have, with certain conditions, been placed at the service of the University for the investigation of problems of interest to the sanitarian and the sanitary engineer. The equipment consists of various types of sewage sedimentation tank, sewage filter, sewage measuring devices, aerators, sterilizing appliances and a complete and representative plant intended for the filtration and sterilization of water by practically all known methods.

## CEMENT TESTING LABORATORY

This laboratory is fitted with all the ordinary moulds, sieves, balances, burettes, steaming and drying tanks, tables, and other appliances necessary in making the usual physical tests of a Portland cement. It is also supplied with completely equipped cabinets for individual work. In addition there are the following:

A 2,000 lb. Richle shot machine for tension.

A 2,000 lb. Fairbanks shot machine for tension.

A 1,000 lb. Olsen automatic shot machine fitted for tests in either tension or cross breaking.

An Olsen soapstone moist closet of modern design.

### METROLOGICAL LABORATORY

The department of surveying and geodesy is provided with all the ordinary field instruments, such as transits, levels, compasses, micrometers, sextants, planimeters, plane tables, tapes, chains, etc., with which is carried on the instruction in practical field operations as detailed elsewhere.

A small laboratory is also established in the basement of the observatory described below, containing the necessary instruments for the refined measurements of geodetic surveying; as, a standard yard and metre, a Rogers 10-foot comparator, an invar base measuring apparatus, a Kater's pendulum with vacuum chamber, a level trier, micrometer microscopes, etc.

The geodetic observatory in connection with this department is used for the instruction of students of the Fourth Year in taking observations for time, latitude, longitude, and azimuth by the precise methods used in connection with a geodetic survey. It contains a 10-inch theodolite and zenith telescope by Troughton & Simms; an astronomical transit instrument and an 8-inch theodolite by Cooke; two electro-chronographs; a Howard astronomical clock; a Dent sidereal clock; a Dent sidereal break-circuit chronometer; a wireless receiving instrument; arithmometers, etc.

### GEOLOGICAL AND MINERALOGICAL LABORATORIES

In the Chemistry and Mining building on College Street the University possesses a modern laboratory for Geology and Mineralogy.

Courses are given in laboratory work, especially in personal examination of type sets of rocks, fossils, minerals and crystal models. These laboratory exercises serve to illustrate the introductory didactic instruction.

For the encouragement of pure crystallography the laboratories are supplied with goniometers of the various types, crystal models, appliances for the cutting of oriented crystal sections and for the physical examination of the same. Practical petrography is carried on in rooms provided with type sets of rocks, both macroscopic and microscopic. Advanced students are taught to make thin sections of rocks and fossils and to study them microscopically. For students in Mining a laboratory course in the interpretation of geological maps and section is provided. Typical mining regions are studied in detail and an opportunity is afforded for the examination of specimens illustrating economic geology.

The laboratory for the preparation of thin sections of rocks, minerals and fossils is provided with electric diamond saws and grinding appliances for the various types of work incidental to the preparation of thin sections and museum material.

A room is also provided for advanced work in cartography and geological surveying.

The departments possess 28 petrological microscopes and 5 of other types, so that it is now possible to provide advanced students with instruments and sets of thin sections for their own especial use. The blowpipe laboratory contains 156 lockers, especially designed for apparatus for students. Provision is made for the study of opaque minerals in reflected light.

W. L. M. C. M. C.

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### ANNOUNCEMENT

*Ceramics*.—Attention is drawn to the establishment of a course of lectures and instruction in Ceramics and related subjects, which will be given as an optional course in the Department of Metallurgical Engineering. The inauguration of this has been made possible through the interest and generous assistance of the Canadian National Clay Products Association and the various industries comprised in it.

Announcement of the curriculum of the course, with the prescription and description of lectures and laboratory work, will be made before the commencement of the Session 1925-26.





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FACULTY OF HOUSEHOLD SCIENCE

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# HONOUR COURSE FOR THE DEGREE OF BACHELOR OF HOUSEHOLD SCIENCE

Courses for the degree of Bachelor of Household Science have been arranged to provide opportunities for the study of Household Science for candidates who have not had courses in Latin. Others who have met the requirements for entrance are also eligible for admission.

ENTRANCE REQUIREMENTS: Pass Matriculation in English, History, Mathematics, Experimental Science, and two of Greek, Latin, German, French, Italian or Spanish, Household Science (an approved examination course), and in addition Honour Matriculation in English, Mathematics (Algebra and Geometry), French or German, and one of a second language, History or a science

## FIRST YEAR

English 1a, 1b, p. 89	2	hours
One of French 1b, p. 95	2	"
German—Special First Year Course similar to French 1b	2	"
*Chemistry 1, 13, pp. 147, 148	6½	"
*Physics 28, p. 132	4	"
*Zoology 5, 6, p. 136	3¼	"
*Household Science	4	"

## SECOND YEAR

Two of History 2b, p. 100	2	hours
English 2a, 2b, p. 89	2	"
Political Economy 2e, p. 109	2	"
*Chemistry 3, 15, part, p. 148	4	"
*Zoology 10, p. 136	2	"
*Botany (Bacteriology) 13, p. 141	2	"
*Physiology 9, p. 146	1	"
*Household Science 2, p. 153	10	"

## THIRD YEAR

One of English 3a, 3b, p. 89	3	hours
Political Economy 4h, p. 112	3	"
Philosophy (Social Ethics) 3a, pp. 115, 116	3	"
*Biochemistry 1, 3, p. 144	7	"
*Household Science 3b, p. 153	14	"
*Hygiene and Sanitation	1	"

## FOURTH YEAR

*Household Science 4b, 4c, 4d, p. 153	10	hours
*Food Chemistry 1, 2, p. 145	8	"
*One of Household Science	4	"
and Food Chemistry	4	"
OR Household Science (Textiles)	8	"

The numerals in the above refer to the corresponding numbers of the courses on the pages indicated in the Calendar of The Faculty of Arts for 1924-25.

\*Honours.

# PASS COURSE FOR THE DEGREE OF BACHELOR OF HOUSEHOLD SCIENCE

ENTRANCE REQUIREMENTS. Pass Matriculation in English, History, Mathematics, Experimental Science, and two of Greek, Latin, German, French, Italian or Spanish, Household Science (an approved examination course).

A candidate who has completed the First Year in the Faculty of Arts may enter at the Second Year.

## FIRST YEAR

English 1a, 1b, p. 89	2 hours
One of French 1a, p. 85	4 "
German 1a, p. 92	4 "
Mathematics 1a, 1b, p. 123	2 "
Physics 28, p. 132	4 "
Household Science	3 "

## SECOND YEAR

Two of English 2a, 2b, p. 89	2 hours
French 2a, p. 95 or German 2a, p. 92	3 "
History 2a, 2b, p. 100	3 "
Political Economy 2e, p. 109 or Philosophy 2a, p. 115	3 "
Chemistry 1, 14, pp. 147, 148	4 "
Zoology 10, p. 136	2 "
Botany (Bacteriology) 13, p. 141	2 "
Physiology 9, p. 146	1 "
Household Science	4 "

## THIRD YEAR

One of English 3a, 3b, p. 89	3 hours
Political Economy 3e, p. 110	3 "
Philosophy (Social Ethics) 3a, pp. 115, 116	3 "
Chemistry 3, p. 148	2 "
Food Chemistry	4 "
Hygiene and Sanitation	1 "
Household Science	9 "

## FOURTH YEAR

Biochemistry 1, p. 144	3 hours
Food Chemistry	6 "
Household Science	11 "

For the graduate of Macdonald Institute who has complied with the entrance conditions and has also completed the First Year of the Faculty of Arts, or its equivalent, an effort will be made to permit her to meet the remaining conditions for the degree of Bachelor of Household Science in one additional academic year.



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THE ONTARIO COLLEGE OF EDUCATION

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## THE ONTARIO COLLEGE OF EDUCATION

### GENERAL INFORMATION

The Ontario College of Education is the University's professional school of education. It trains candidates for diplomas and certificates as teachers and in particular for Provincial certificates as teachers of Art, Household Science, and Physical Culture, as High School Assistants and Specialists and as First Class Public School teachers. It also offers courses for the B.Paed., and D.Paed. degrees.

The buildings of the Ontario College of Education on Bloor Street contain well-equipped and well-ventilated lecture-rooms, laboratories, and reading-rooms for the accommodation of the students, and model class-rooms for observation and practice-teaching. So far as necessary the observation and practice-teaching are supplemented by observation and practice-teaching in schools in the City of Toronto.

While the chief exercises of the Ontario College of Education will be conducted in the buildings on Bloor Street, the students may use the University's library, gymnasium, athletic fields, etc., under such conditions as obtain with other students. They will also be admitted free to the Royal Ontario Museum, Bloor Street, from 9 a.m. to 5 p.m., on presentation of their registration cards. Thus, while they are subject to the same regulations, they enjoy all the privileges of the other University students.

### BOARD AND LODGING

The Secretary of the Ontario College of Education and the Secretary of the Christian Association of the University will forward accredited lists of boarding-houses on request.

### COURSES

The following courses are offered:

I. Courses for (1) Interim Ordinary High School Assistants' and High School Specialists' certificates with Interim First Class Public School certificates or Elementary certificates in Physical Culture and Art, (2) Ordinary certificates as teachers of Household Science.

II. Courses for the B.Paed. degree.

III. Courses under the School of Graduate Studies for the degrees of D.Paed., M.A. and Ph.D.

## I.

COURSES FOR INTERIM ORDINARY HIGH SCHOOL ASSISTANTS' AND HIGH SCHOOL SPECIALISTS' CERTIFICATES WITH INTERIM FIRST CLASS PUBLIC SCHOOL CERTIFICATES OR ELEMENTARY CERTIFICATES IN PHYSICAL CULTURE AND ART, AND FOR ORDINARY CERTIFICATES AS TEACHERS OF HOUSEHOLD SCIENCE.

## SESSIONS

1. Enrolment in classes of the regular session will begin Tuesday, September 29th, and the instruction will begin September 30th, at 10 a.m. The Autumn Term will end December 22nd, at 5 p.m., and the Easter Term will begin January 5th, at 9 a.m. The Spring Term will begin April 12th and end June 18th.

## DUTIES OF STUDENTS

2. (1) Regular attendance on the part of candidates for Provincial certificates is indispensable, except for such as are exempt from attendance under the regulations of the Department of Education, and for such as are experienced teachers and are permitted by the Dean to act, after Christmas, for not more than a total of one fortnight, as substitute teachers in the schools of Ontario. A return of the attendance of each student will be made to the Minister of Education at the close of the session.

(2) Students whose class-work shows them to be unduly deficient in scholarship, or whose conduct or progress is unsatisfactory, may be dismissed from attendance by the Dean at any time during the session.

(3) On the Dean's report to the Minister of Education as to the physical unfitness of a student for training for a Provincial certificate as a teacher, the Minister may require a special medical examination of such student, and, as a result thereof, may direct that his registration for such training be cancelled.

(4) Various religious, athletic, literary and dramatic associations are formed each session. For professional improvement all students are required to share in the activities of the literary and dramatic associations.

## APPEALS

3. The answer papers of the final examinations of all unsuccessful candidates for Provincial certificates are re-read by the examiners, and the results of the first reading reconsidered before a decision to reject is reached. Despite this fact any unsuccessful candidate may have his case



considered a third time if within two weeks after the announcement of the results he lodges with the Minister of Education his appeal, with a statement of the grounds on which it is based, and with a fee of \$2.00. If made within the two weeks following, the fee will be \$5, and no appeal will be entertained thereafter. The fee will be refunded if the appeal is sustained.

#### THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIP

4. A Scholarship of the value of two hundred and fifty dollars has been established by the Alumni Federation of the University from the War Memorial Fund to be awarded to a student in the Ontario College of Education.

The general basis on which the above scholarship may be awarded is as follows:

- (a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918.
- (b) Standing in course of studies.
- (c) Need of assistance.
- (d) Such other general qualifications of merit as may commend themselves to the Committee.

Information regarding this scholarship may be obtained from the Secretary-Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made.

## COURSE FOR INTERIM ORDINARY HIGH SCHOOL CERTIFICATES.

### PURPOSE

5. The Course for Interim Ordinary High School certificates prepares candidates therefor in the theory and art of organizing, governing, and instructing pupils in the Continuation Schools, Grades A and B, and in High Schools.

### CONDITIONS OF ADMISSION

6. (1) Except as provided in (2) below, an applicant for admission to the course for an Interim Ordinary High School Assistant's certificate should make application not later than September 29th, to the Secretary of the Ontario College of Education on a form to be obtained from him and should submit with this application, on official forms also to be supplied by the Secretary:

(a) A certificate from the Deputy Registrar-General of Births, Parliament Buildings, Toronto, or an affidavit by one of the parents or other relative, or other person cognizant of the fact, that the applicant will be at least 20 years of age before October 1st, 1925.

(b) A certificate from a clergyman or other competent authority that he is of good moral character.

(c) A certificate from a duly qualified medical practitioner that for the purposes of this certificate he has made a careful examination of the applicant, and certifies as follows: (i) that he is free from heart disease or any other serious organic affection; (ii) that he is free from pulmonary affection, defective hearing, or seriously defective eyesight, or abnormal conditions of appearance which would interfere with his work as a teacher; and (iii) that in other respects also he is physically able for the work of a teacher as prescribed in the courses of study of the Ontario College of Education and of the Provincial Schools represented in the certificate for which he is a candidate. (See also Section 2 (3)).

(d) An agreement, if successful in obtaining a teacher's certificate, to teach thereon in Ontario, for at least the first year of his subsequent teaching experience.

NOTICE.—*A violation of this agreement will render the certificate invalid.*

(e) A certificate from a competent authority that he is a British subject.

(f) His certificate of graduation as Bachelor or Master of Arts, Bachelor or Master of Science, Bachelor of Commerce, Bachelor of Agriculture, or Bachelor of Applied Science, from a British university, after a regular

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

university course approved by the Minister of Education as to entrance requirements and as to content of the undergraduate courses. Each applicant must have Upper School or Honour Matriculation standing in English, History and Mathematics or the equivalent of such standing.

(2) An applicant for admission to this course who is not a candidate for the certificate of the Ontario Department of Education must comply with such conditions of admission as the Council of the Ontario College of Education may determine.

(3) Applications, by students not in attendance, for admission to the examinations should be made, at least one month before the examinations begin, to the Secretary of the Ontario College of Education, University of Toronto, on an official form to be obtained from the Secretary.

7. The annual fee for the Course for Interim Ordinary High School Assistants' certificates, which includes the library and examination fees, is \$25.00. The fee for the examination in the Course for Interim High School Assistants' certificates when the examination is taken by students not in attendance, will be \$15.00, or \$10.00 for Part I and \$5.00 for Part II, or in the case of partial examination, \$2.00 per subject. The fee for the University diploma will be \$2.00. A library deposit of \$1.00 will be required of all students, and a fee of \$8.00 for membership in Hart House of all male students. All students will be required to become members of the respective Students' Administrative Councils, and the women students who take the classes in Physical Culture to become members of the Women's Athletic Association.

## TEXT-BOOKS

8. The text-books for the academic work are those prescribed for the Lower and Middle Schools of the High Schools of Ontario in each subject of the student's course.

For Observation and Practice-teaching students should supply themselves with copies of the text-books authorized for use in the above-named grades of schools. They should also supply themselves with the professional text-books whose titles appear in italics in the lists given below under each subject.

## PROGRAMME OF STUDIES

9. (1) The course of training for Interim Ordinary High School Assistants' certificates consists of two parts as follows:

Part I: The Science of Education, School Management and Law, English, History, Geography, *and* (a) Latin, and French or German or Spanish or Greek *or* (b) Mathematics and Science.

Part II: Observation and Practice-teaching.

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

(2) Students in attendance in the Interim Ordinary High School Assistants' course *may* also take the course in Vocal Music, and, if they possess the required academic qualifications, a Specialist's course, and *must* also take *either* the course for the First Class Public School certificate *or* the course for the Elementary certificate in Physical Culture *or* the course for the Elementary certificate in Art.

## ORGANIZATION OF COURSE

10. (1) The following introductory work will be taken up at the beginning of the session.

(a) About 20 lectures upon the General Method of the Recitation in the Science of Education.

(b) Supervised Observation and Practice lessons (about 10 of each) in the different grades or forms of the High Schools.

(2) The instruction in the special methodology of the subjects of the High School courses will be accompanied by a review from the academic standpoint of such portions of each subject as may be necessary to determine the scholarship of the students and to illustrate the methods of instruction in that subject, dealing in particular with those parts of the course that are difficult of presentation.

(3) So far as the conditions permit the programme of instruction will be organized on the basis of intensive study of a few subjects at a time.

(4) (a) The lectures will be distributed among the various prescribed subjects approximately as follows: The Science of Education 100, School Management and Law 50, English 90, History 20, Geography 15, Mathematics 80, Latin 50, French or German or Spanish or Greek 40, Science 40, Vocal Music 30.

(b) The courses in Mathematics, English, and Vocal Music will begin at the opening of the session and will continue until the close; those in the other subjects will be given, as far as practicable, in correlation with the Observation and Practice-teaching and will continue until completed.

(c) The Observation work will begin in the third week of the session, and the Practice-teaching in the fifth week. Exclusive of the introductory work, the programme of instruction will include for each student at least 50 Observation lessons and 30 Practice-teaching lessons. These numbers may be increased to meet the needs of individual students.

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

## OBSERVATION AND PRACTICE-TEACHING

11. (1) The introductory course defined herein will be followed by systematic Observation and Practice-teaching, under the general supervision of the lecturers in the Ontario College of Education.

(2) (a) The Observation and Practice-teaching lessons for each student will be arranged to represent as far as practicable the work in all forms and grades of the Lower and Middle Schools of the High Schools. There will also be Observation in the Upper School of the High School.

(b) So far as practicable continuous Practice-teaching for several periods will be required, the students being wholly responsible for the management of the classes.

(3) Students will be notified of the subject and scope of the Observation lesson, and should prepare the lesson beforehand. After observing the lesson they will discuss it with the teacher or lecturer concerned.

(4) Students will be notified of the subject and the scope of the practice-teaching lesson by the teacher concerned, and will prepare a plan of each Practice-teaching lesson for submission to the teacher.

(5) (a) Model lessons will be taught by the teachers of the Practice-schools in accordance with the regular programme of said schools.

(b) The lecturers of the Ontario College of Education will develop the details of their subjects in the teaching order, and after each suitable step, will also themselves teach model lessons in special classes and in the practice schools.

(6) (a) The necessary applications of the Science of Education and of Special Methods will be made systematically in connection with the Observation lessons and the Practice-teaching; so that the course may be taken up in terms of the pupil's mind and growth. Throughout the course the instructor in the Science of Education will himself illustrate by actual teaching the principles he has discussed in class.

(b) As far as practicable, the lecturers of the Ontario College of Education will be present at the Observation lessons and Practice-teaching of the students and will make jointly the criticism and valuation of their work.

## EXAMINATIONS

12. (1) For the purpose of determining the final standing of students the courses are classified into the following subjects:

Part I: Science of Education, School Management and Law, English, History, Mathematics, Geography, Latin, French, German, Spanish, Greek, Science, Vocal Music.

Part II: Observation, Practice-teaching.

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

(2) (a) The final standing of students in attendance will be determined by the combined results of the sessional records and the records of the final examinations in the subjects of Part I, and by the results of the records of the Observations and Practice-teaching of Part II.

(b) The sessional records represent oral and written exercises, practical work, practice in making examination papers, and in valuing the answer-papers of pupils, and such other tests as the staff may prescribe.

(c) At the close of each term there will be final examinations in such courses of Part I as have been completed in the term.

(d) At the examinations in Part I, each paper will contain questions in methodology, based upon the academic subjects, which will test the candidate's academic knowledge and, if his sessional records and his answers to these questions show that his academic knowledge is defective, he will be rejected on this ground alone.

(e) The maximum marks assigned to each subject in Part I will be 100. In all subjects except Vocal Music, a maximum of 40% of the marks will be assigned to the sessional records and 60% to the final written examinations. In Vocal Music a maximum of 50% of the marks will be assigned to the sessional records and 50% to the final written examinations.

(f) A maximum of 800 marks will be assigned to Practice-teaching and of 400 to Observation. The standing of the student in Observation and in Practice-teaching will be based upon his sessional records in the lessons following those which form part of the introductory courses.

## CERTIFICATES

13. (1) A student who obtains 50% of the marks in each of the required subjects of Part I and 60% of the aggregate of the marks in each of the divisions of Part II, may, on the recommendation of the examiners, be awarded by the Minister of Education, an Interim Ordinary High School Assistant's certificate.

(2) A student who passes in Part II and fails in not more than two of the obligatory subjects of Part I will be exempted from further attendance.

(3) All other students who have failed to obtain the necessary final standing will be required to attend another session, beginning after the Christmas vacation.

(4) (a) (i) Candidates who are exempted from attendance at the Ontario College of Education, as provided in (2) above, may complete their standing for a certificate by re-writing, at one annual examination, or, separately, at different annual examinations, the examination in the subject or subjects in which they failed.

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

(ii) Candidates who failed at an examination under former Regulations and who were exempted from subsequent attendance at the Ontario College of Education will take, not later than a date determined in each case by the Minister of Education, the final examination papers as prescribed herein but their standing will be determined in the subjects as constituted under the Regulations in force when they first wrote.

(iii) Candidates who have been exempted by the Minister of Education from attendance at the Ontario College of Education on account of equivalent training in other provinces or countries, and who are required to write on the final examinations of the Ontario College of Education will take the prescribed final examinations in the subjects of Part I, and will also satisfy the examiners by teaching and other tests that they are competent for the work in the subjects covered by the certificate for which they are candidates.

(b) (i) The pass standard for candidates exempt from attendance will be the same as that for candidates in attendance but no allowance will be made for sessional work, if any, in the case of candidates not in attendance.

(ii) The final examinations in Vocal Music for students exempt from attendance, will include both a practical and a written test, 50 marks being assigned to the written test and 50 to the practical test.

(c) (i) Candidates exempt from attendance shall take their practical tests in Part II at such times during the session as may be agreed upon with the examiners. They shall take their examinations in the subjects of Part I in June on dates to be determined by the examiners or, in part, in June and, in part, at such times during the session as are set apart for the examination of students in attendance.

(ii) Students exempt from attendance may take their written examinations in Part I at Toronto, or at such local centres and under such conditions as may be determined by the Senate. They must, however, take their practical tests in Vocal Music, and in Teaching at Toronto.

(5) (a) Candidates who hold First Class Public School certificates, with the academic standing required for admission to the High School Assistants' Course and who submit certificates of at least one year's successful experience in a Continuation School from the Inspector or Inspectors under whom they have taught will be exempted from the attendance, excepting for the Spring Term, but will take the final examinations prescribed for Part I, and must also satisfy the examiners by practical tests that they are able to teach the subjects of the High School courses

(b) Other candidates who hold a First or a Second Class certificate with the academic standing required for admission to the High School

COURSE FOR INTERIM ORDINARY HIGH SCHOOL—*Cont.*

Assistants' Course will be exempted from attendance during the Autumn Term, but will take the final examinations prescribed for Part I and must also satisfy the examiners by practical tests that they are able to teach the subjects of the High School courses.

## DIPLOMAS

14. Successful candidates who are awarded Ordinary High School certificates by the Minister of Education and such other successful candidates as may be admitted to the course under section 6 (2), may be awarded University diplomas.



## COURSES FOR HIGH SCHOOL SPECIALISTS' CERTIFICATES.

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### PURPOSE

15. The courses for Interim High School Specialists' certificates prepare candidates therefor in the theory and art of organizing and instructing the pupils of the High Schools and Collegiate Institutes, in certain departments or subjects of the courses of said Schools.

### CONDITIONS OF ADMISSION

16. (1) Applicants for admission to the courses for Interim High School Specialists' certificates, or to the final examinations for said certificates, must also be applicants for admission to the courses for Interim Ordinary High School Assistant's certificates, or must be applicants for admission to the examinations therefor without attendance throughout the session, or must already hold Ordinary High School Assistant's certificates. No candidate will be awarded an Interim High School Specialist's certificate or receive credit towards said certificate *before* he has been awarded an Interim Ordinary High School certificate.

(2) (a) A candidate for an Interim High School Specialist's certificate who is also a candidate for admission to the course for an Interim Ordinary High School Assistant's certificate, must comply with the conditions for admission prescribed for candidates for Interim Ordinary High School Assistants' certificates, and must also have his academic standing as a specialist approved by the Minister of Education before he will be admitted to said specialist course or to the examinations for the specialist certificate.

(b) A candidate for an Interim High School Specialist's certificate who holds an Ordinary High School Assistant's certificate, must have his academic standing as a specialist approved by the Minister of Education before he will be admitted to the examinations for the specialist certificate.

### FEES

17. When an Interim High School Specialist Course is taken concurrently with the Course for an Interim Ordinary High School certificate, or when an Interim High School Specialist examination is taken concurrently with the examination for an Interim Ordinary High School certificate, there is no additional fee. The fee for a specialist course or examination, one or both, taken apart from the course or examination for an Interim Ordinary High School certificate, will be \$5.00 per course or per examination, one or both, as the case may be.

COURSES FOR HIGH SCHOOL SPECIALISTS—*Cont.*

## COURSES

18. (1) Courses will be offered for Interim High School Specialists' certificates in Agriculture, Classics, Commerce, English and French, English and History, French and German, French and Spanish, Mathematics, Mathematics and Physics, Moderns and History, Science, and Household Science.

(2) Each specialist course will consist of at least two seminar-periods per week throughout the session, and of special Observation and Practice-teaching in the specialist department in which the candidate is an applicant for a certificate.

## TEXT-BOOKS

19. Students in the courses for High School Specialists' certificates will supply themselves with such special professional text-books as may be recommended by the instructors from the lists given under the details of each course. The other books and journals, whose names appear in these lists, may be consulted in the library of the Ontario College of Education.

## EXAMINATIONS

## SUBJECTS AND STANDARDS

20. (1) Subject to the condition that no student may be awarded an Interim High School Specialist's certificate who does not already hold or is not also awarded an Interim Ordinary High School Assistant's certificate, the final standing of students in attendance in a specialist course will be determined by the records of the Observation and Practice-teaching in the department or subject concerned, and by the combined results of the sessional records and the records of the final examinations in the same department or subject. The sessional records represent oral and written exercises, practical work, practice in preparing examination papers, and in valuing the answer-papers of pupils, and such term work as the instructors may prescribe. The records of the final examinations will be based upon two examination papers taken in each department at the close of the session. The maximum marks represented in the Observation and Practice-teaching will be 100; in the sessional records 40; and in the final written examinations of the department or subject 60.

(2) The final standing of students not in attendance will be determined by the final written examinations and by teaching in the department concerned. For this purpose the maximum of marks in each case will be 100.

COURSES FOR HIGH SCHOOL SPECIALISTS—*Cont.*

## CERTIFICATES

21. (1) On the recommendation of the examiners the Minister of Education may grant Interim High School Specialists' certificates to students in attendance who have fulfilled the conditions of the course for Interim Ordinary High School certificates, who in their specialist department have obtained (a) 60% of the aggregate of marks represented in the sessional records and the records of the final examinations and (b) 60% of the marks assigned to the Observation and the Practice-teaching.

(2) On the recommendation of the examiners the Minister of Education may grant Interim High School Specialists' certificates to students exempt from attendance who hold or are awarded Ordinary High School certificates, who hold also the necessary academic certificates as specialists, and who obtain 60% of the marks assigned to the written examinations and to the Practice-teaching, respectively, in the specialist course concerned.

(3) (a) For students not in attendance the written examinations in the courses for Interim High School Specialists' certificates will be held at the end of the session at Toronto or at such local centres and under such conditions as may be determined by the Senate.

(b) For students not in attendance the practical examinations will be held at Toronto, except in the case of those to whose competency the visiting Provincial Inspector certifies, after due notification to such Inspector by the candidate of the latter's intention to become an applicant for a specialist's certificate.

## COURSES FOR FIRST CLASS PUBLIC SCHOOL CERTIFICATES.

## PURPOSE

22. The course for First Class Public School certificates prepares candidates therefor in the theory and art of organizing, governing, and instructing the pupils of the Public, Separate, and Continuation Schools.

## CONDITIONS OF ADMISSION

23. Applicants for admission to the course for Interim First Class Public School certificates or to the final examinations for said certificates must comply with the conditions of admission prescribed for candidates for Interim Ordinary High School Assistants' certificates. No candidate will be awarded an Interim First Class Public School certificate or receive credit towards said certificate *before* he has been awarded an Interim Ordinary High School Assistant's certificate.

## FEES

24. When an Interim First Class Public School course is taken concurrently with the course for an Interim Ordinary High School certificate, or when the examination for an Interim First Class Public School certificate is taken concurrently with the examinations for an Interim Ordinary High School Assistant's certificate, there is no additional fee. The fee for a First Class Public School course or for the examinations of said course taken by one who already holds an Interim Ordinary High School Assistant's certificate will be \$5.00 for the course or for the examinations, one or both, as the case may be, or \$2 00 for each examination paper.

## TEXT-BOOKS

25. The text-books for the academic work of the course for Interim First Class Public School certificates shall be those prescribed in each subject for the High, Public and Separate Schools. The text-books for the professional work shall be those whose titles are printed below in italics.

## PROGRAMME OF STUDIES

26. (1) The course of training, which is supplementary to the course of training for Interim Ordinary High School certificates, includes the following subjects:

Part I: Primary Reading and Spelling, Composition (including stories and biographies from History); Arithmetic, Primary and Advanced,

COURSES FOR FIRST CLASS PUBLIC SCHOOL—*Cont.*

Algebra, Geometry; two of Latin, French, German or Spanish, Greek, Biology, Physics and Chemistry; Elementary Science, Nature Study, Agriculture and Horticulture, Writing, Music, Art, Hygiene, Physical Culture, Manual Training, Household Science (for women), as defined in the Ontario Normal School courses for Interim First Class Public School Certificates.

Part II: Observation and Practice-teaching—at least thirty observations and fifteen practice lessons—to be conducted under conditions defined in Ontario Normal School courses for Interim First Class Public School certificates.

(2) To the instruction in the subjects of the course will be allotted a maximum of two hundred lecture periods.

## MODIFICATIONS OF COURSES

27. (1) Students who take the Latin, French, German or Spanish, Greek, or Music of the Interim Ordinary High School Assistant's course will be exempted from the corresponding subjects of the Interim First Class Public School course. Similarly those who take the Mathematics of the Interim Ordinary High School Assistant's course will be exempted from Advanced Arithmetic, Algebra and Geometry, and those who take Science from Elementary Science, Biology and Physics and Chemistry.

(2) Students who hold Provincial professional certificates in Physical Culture, Writing, Music, Art, Manual Training, or Household Science will be exempted from the examinations thereon but will take the Observations and Practice-teaching therefor.

(3) Candidates who hold Provincial Second Class Public School certificates and who take Latin and a second language as the option of the Interim Ordinary High School Assistants' course will be exempted from the instruction and examinations in all subjects of the Interim First Class Public School course except Advanced Arithmetic, Algebra and Geometry, Elementary Science, Agriculture and Horticulture, and Hygiene, while those who hold Provincial Second Class Public School certificates and take Mathematics and Science as the option will be exempted from the instruction and examination in all subjects of the Interim First Class Public School course except Agriculture and Horticulture, and Hygiene.

## EXAMINATIONS

28. (1) Subject to the condition that no student may be awarded an Interim First Class Public School certificate who does not already hold, or is not also awarded an Interim Ordinary High School Assistant's certificate, the final standing of the students in attendance in the course for Interim First Class Public School certificates will be determined by the records of the Observation and Practice-teaching and by the combined results of

COURSES FOR FIRST CLASS PUBLIC SCHOOL—*Cont.*

the sessional records and the records of the final examinations in said course. Subject to the same condition, the final standing of candidates not in attendance will be determined by the records of the final written examinations and of practice-teaching.

(2) The examinations in the subjects of the course for Interim First Class Public School certificates shall be conducted, *pari passu*, in the terms and under the conditions set out in the Calendar of the course for Interim First Class Public School certificates of the Ontario Normal Schools.

## CERTIFICATES

29. (1) (a) Subject to the conditions of Sec. 28 (1), a candidate who obtains 50% of the marks in each subject of the course for Interim First Class Public School certificates and 60% of the aggregate of the marks in each of Observation and Practice Teaching may, on the recommendation of the examiners, be awarded by the Minister of Education, an Interim First Class Public School certificate.

(b) Subject to the same conditions, a candidate who passes in Observation and Practice Teaching and fails in not more than three subjects and who does not receive less than 45% in any subject, may, on the recommendation of the examiners, be granted by the Minister an Interim Second Class Public School certificate.

(c) Subject to the same conditions, a candidate who passes in the Observation and Practice-teaching and fails in not more than three subjects may be exempted from further attendance and may complete his course for an Interim First Class Public School certificate by rewriting at one annual examination, or, separately, at different annual examinations, the examinations in the subject or subjects in which he failed.

(2) All candidates other than those referred to in (b) and (c) who have failed to obtain the necessary final standing will be required to attend another session, beginning after the Christmas vacation.

(3) Regulations 13, (4) (a) (i), (ii), (iii), (b) (i), (c) (i), (ii), which apply to candidates for Interim Ordinary High School Assistants' certificates who are exempt from attendance apply also, *pari passu*, to candidates for Interim First Class Public School certificates who are exempt from attendance.

## COURSES FOR ELEMENTARY CERTIFICATES IN PHYSICAL CULTURE AND IN ART.

### PURPOSE

30 The courses for the Elementary certificates in Physical Culture and Art prepare candidates therefor in the theory and art of organizing, governing, and instructing in Physical Culture and Art the pupils of Continuation and High Schools.

### CONDITIONS OF ADMISSION

31. Students who have been admitted to the course for Interim Ordinary High School certificates will take also either the course for an Interim First Class Public School certificate or the course for the Elementary certificate in Physical Culture or the course for the Elementary certificate in Art.

### FEES

32. As the course for the Elementary certificate in Physical Culture or in Art may be an obligatory part of the course for the Interim Ordinary High School Assistant's certificate, no additional fee is required.

### TEXT-BOOKS

33. Students in the courses for Elementary certificates in Physical Culture or Art will supply themselves with such text-books as may be recommended by the instructors from the lists given under the details of those subjects.

### PROGRAMME OF STUDIES

34 (1) The subjects of the course for Elementary certificates in Physical Culture or in Art are to be found on pages 41-44.

(2) To the instruction in the subjects of the course in Physical Culture or in Art will be allotted a maximum of one hundred and twenty lecture periods.

### EXAMINATIONS

35. (1) The final standing of candidates for the Elementary certificate in Physical Culture or in Art will be determined by the results of the sessional work, final practical tests, and final written examinations.

(2) (a) The following is the scheme of examinations and tests in Physical Culture:

COURSES FOR ELEMENTARY CERTIFICATES IN PHYSICAL CULTURE AND ART--*Continued**Written Examinations:*

Anatomy, Physiology and First Aid

*Sessional and Final Practical Tests:*

FOR WOMEN: Calisthenics, Apparatus, Games and Military Drill, Swimming.

FOR MEN: Calisthenics, Apparatus, Indoor Games and Athletics, Swimming.

Fifty per cent. of the marks in each of the practical examinations will be assigned to the sessional and fifty per cent. to the final tests.

Each subject of the written examinations and each subject of the practical tests shall be valued at 100.

(b) The following is the scheme of examinations and tests in Art:

*Sessional Work*

All sessional work must be completed satisfactorily before the other tests may be taken.

*Practical Time Tests*

Drawing from common objects, in pencil, and in charcoal.

Drawing from nature.

Composition, simple illustration of a given subject.

Modelling of simple forms.

Design of conventionalized natural forms, lettering.

Colour painting still life in colour harmony.

Blackboard and memory drawing.

*Written Tests:*

Outlines of the history of art.

Theory of colour.

Design and applied art.

Elementary perspective.

Methods of teaching art in High and Continuation Schools.

Each subject and each paper shall be valued at 100.

## CERTIFICATES

38. (1) On the recommendation of the examiners the Minister of Education may grant an Elementary certificate in Physical Culture or Art, as the case may be, to the student in the course for an Interim Ordinary High School certificate, provided that said student is awarded an Interim Ordinary High School certificate and obtains (a) in Physical Culture a minimum of 50% of the marks assigned to each subject of (i) the written



COURSES FOR ELEMENTARY CERTIFICATES IN PHYSICAL CULTURE AND ART—*Continued.*

and of (ii) the practical tests, or (b) in Art a minimum of 50% of the marks assigned to each subject or paper of the practical and written tests, respectively.

(2) (a) No student will be awarded an Elementary certificate in Physical Culture or Art whose attendance or progress in any part of the course has been reported as unsatisfactory.

(b) The Dean will investigate the claims of the candidates who report themselves as unable for physical reasons to take the course in swimming, provided that such claims are presented to the instructor at the beginning of the session on a form and after a manner defined by the Minister of Education. If any candidate is exempted from the instruction in swimming by the Minister of Education that fact will be stated in his certificate.

(3) On the recommendation of the examiners, the Minister of Education may permit candidates in these courses who have completed the sessional work and taken all practical tests successfully but who have failed in one or more subjects of the written tests, to take the written tests without attending again or repeating their practical work or tests.

## DETAILS OF COURSES.

FOR ORDINARY HIGH SCHOOL ASSISTANTS', HIGH SCHOOL SPECIALISTS', AND FIRST CLASS PUBLIC SCHOOL CERTIFICATES AND FOR ELEMENTARY CERTIFICATES IN PHYSICAL CULTURE AND ART.

37. The topics of the subjects of the courses for Interim Ordinary High School Assistants' and High School Specialists' certificates and for Elementary certificates in Physical Culture or Art are given below. For the courses for Interim First Class Public School certificates these topics and subjects must be supplemented by the topics and subjects set out in the Normal School courses for First Class Public School certificates.

## THE SCIENCE OF EDUCATION.

38. *Introduction*.—Democracy and education; the special need for education in a democracy; teaching as a vocation; teacher-training in a modern educational system.

*General Method*.—The meaning of method and its psychological foundations; procedures common to various branches of teaching; types of lessons; notes of lessons.

*Principles of Education*.—The nature and aims of education; the function in education of the state, home, church, vocation, etc.; the curriculum, its nature, purpose, and selection; modern movements for the reform of education.

*Educational Classics*.—The study in class of selected portions of a few educational classics.

*Educational Psychology*.—The original nature of man, including a study of heredity, instinct, and capacities.

The Psychology of the learning process, including the study of such topics as habit, rates of learning, practice, fatigue, memory, reasoning.

The Psychology of typical high school branches; standard scales for their measurement.

The measurement of general intelligence; an examination of the Binet-Simon and other tests.

Child Study, its aims, methods, and results.

## DETAILS OF COURSES.

*Books of Reference:*

*Ontario Normal School Manuals: Science of Education, History of Education.*

Adams (Ed.): *The New Teaching.*

Dewey: *Democracy and Education.*

Gates: *Psychology for Students of Education.*

Raymont: *Principles of Education.*

Ruediger: *Principles of Education*

Sandiford: *Mental and Physical Life of School Children.*

Starch: *Educational Psychology.*

Waddle: *Introduction to Child Psychology.*

Woodrow: *Brightness and Dullness in Children.*

## SCHOOL MANAGEMENT AND LAW.

39. School Management, School Organization, School Administration; aims and scope of each; relation of each to the teaching process.

Forms of educational control; Department of Education and its functions; school boards and their functions; relation of inspectors and principals to teachers; teachers to caretakers, trustees; finance of education; business administration

Types of schools; functions of each type, primary, secondary, and higher schools; consolidated schools; day and evening schools; training schools; commercial, industrial, agricultural, and technical schools; schools for subnormal children, defectives, and delinquents.

School sites and surroundings; school buildings; construction, care-taking, heating, ventilation, lighting, sanitation, decoration, and equipment; apparatus; libraries, selection, cataloguing, use; text-books, authorization, use and abuse; free text-books; visual aids; medical and dental inspection; the detection of communicable diseases.

The teacher: characteristics, qualifications, appointment, tenure of office, promotion, improvement of status; superannuation of the teacher; duties of the teacher in relation to pupils, parents, and other citizens; qualifications and characteristics of the successful teacher; his code of ethics.

The pupil: privileges and duties; the health of the pupil; the formation of his habits; the teacher's responsibility; fatigue; moral training.

The first day in school; the importance of the teacher's work and attitude.

Organization: grading and classification; promotion; retardation; elimination; care of individual and of abnormal.

The recitation: assignment of home and seat work; oral and written exercises; how to study; questioning; treatment of answers.

Discipline: its scope; relation to methods of teaching, incentives; causes of disorder and inattention; methods of dealing with weaknesses and offences; penalties.

## DETAILS OF COURSES.

Time-tables: purpose; principles involved in construction; typical daily programmes for various kinds of schools.

Records and reports: keeping registers; value and kinds of school records; forms of reports.

Examinations and other tests of progress.

School Law and Regulations and Public Health Acts and Regulations in so far as they refer to the duties of school boards, teachers and pupils.

*Books of Reference:*

*Regulations and Courses of Study for the Public, High and Continuation Schools of Ontario.*

*Ontario Schools Acts, and Public Health Act.*

*Ontario Normal School Manual: School Organisation and Management.*

Bennett: School Efficiency.

Bagley: Class Management.

Ballard: The New Examiner.

Hume: The Improvement of the Elementary Teacher in Service

Johnston: The Modern High School.

## ENGLISH.

40. (1) *Reading:* The importance of training in reading and in the principles of vocal expression to the pupil's ordinary speech and general culture.

The Reading Process: The factors involved in the process; the work of the eye in reading, word-recognition; the reading process as a specialized mode of the thought process; the relation of ideas to symbols, constant necessity for associating the printed symbol directly with the idea; the ideal conditions for the formation of this association.

The nature and function of silent reading; methods of conducting lessons in silent reading; the basis of expressive reading; the principles of vocal expression; the criticism of the pupil's reading; the place and limitations of imitative reading.

Practice; voice training; a class course in expressive reading; this work to be supplemented by practice in connection with the course in literature and with the activities of the Literary Society and the Dramatic Club.

Tests: Reading tests, e.g., "The Curtis Standard Test in Reading".

(2) *Literature.*—The place of literature in school courses; the principles followed in Ontario and elsewhere in arranging literature courses for schools; books suitable for intensive study in the various forms or grades of the schools; class treatment of such types of literature as the

## DETAILS OF COURSES.

short poem, the long narrative poem, the play, the short story, and the novel; examinations in literature; supplementary reading, its importance, selection of books, testing of reading.

The course in literature includes a consideration of the problems connected with the teaching of silent and expressive reading and voice training.

(3) *Grammar*.—Introductory: The meaning of English grammar; its relation to speech; reasons for and against retaining it in elementary schools; reasons for deferring the formal study till Form IV; introductory work of Form III in connection with composition.

Consideration of the content and value of the course in grammar in Continuation and High Schools, the work to be covered in each of the Forms of the Lower School; use of a text-book in grammar; terminology; the use of definitions; treatment of false syntax; methods of conducting instruction in grammar discussed and illustrated in lessons upon subjects selected from topics difficult of presentation.

(4) *Composition*.—Introductory: The value of language training; present-day tendencies in the teaching of composition.

Methods: How habits of speaking and writing good English are formed; expression as a stage in the development of every lesson; the forms of expression that aid most the development of language powers; the effect of the teacher's example upon the pupils' language; relative value of reading and telling stories; the story method; value of reading and memorizing good literature; incidental work in language training.

The relation of oral and written composition; purpose and value of oral exercises; criticism of oral work, the dangers connected therewith and the means of avoiding them.

The principles to be kept in view in conducting exercises in written composition; the method of gathering, selecting, and arranging material; value of topical outlines; supervision and aid during writing; the place of home work in written composition; the value of formal linguistic exercises; correction of common errors; letter-writing and business-forms.

The mechanics of written composition: Sentence and paragraph structure; paragraph compositions; the use of capitals, punctuation marks, quotation marks, abbreviations, etc.

The principles to be followed in arranging a course in composition; work suited to the age and experience of the student; use of a text-book in composition; amount of written work to be demanded; criticism of essays; standards of marking; place of rhetoric in the school course; importance of oral composition; sources of material; class procedure.

## DETAILS OF COURSES.

*Books of Reference:**Ontario High School Grammar.**Ontario High School Composition.**Public School Manual in Composition.**Bolenius: The Teaching of Literature in Grammar Grades and the High School.**Bolenius: The Teaching of Oral English.**Carpenter, Baker and Scott: The Teaching of English.**Chubb: The Teaching of English.**Clark: How to Teach Reading in the Public School.**Dickie: Modern Practice in the Teaching of Composition.**Huey: Psychology and Pedagogy of Reading.**Lamborn: The Rudiments of Criticism.**Macpherson: The Study of English Literature.*

## HISTORY.

41. Stages in the study of history; the reflective stage; the tools of the history teacher; the High School course in history and civics; importance, content, methods of teaching. Illustration of methods in lessons on topics selected from the history prescribed for the Lower and Middle Schools. Students will be required to show their ability to gather historical material, and to present it in acceptable forms.

*Books of Reference:**Public School Manual: History.**Barnard: The Teaching of Community Civics.**Bourne: The Teaching of History and Civics.**Dunn: Social Studies in Secondary Education.**Jarvis: The Teaching of History.**Johnson: The Teaching of History.**Macpherson: Visual Aids in the Teaching of History.**Tryon: The Teaching of History in Junior and Senior High School.*

## SEMINAR IN ENGLISH AND HISTORY.

42. *English:*

(a) A study of topics difficult of presentation in the English grammar, composition, and literature prescribed in the High School courses of study.

(b) A discussion of the organization of the course in English throughout the various Forms of the High School.

(c) A study of the methods of class-room procedure in the teaching of English, and of problems arising therefrom.

## DETAILS OF COURSES.

*Books of Reference:*

Carpenter, Baker and Scott: *The Teaching of English.*

Chubb: *The Teaching of English.*

Hosic: *Reorganization of English in Secondary Schools* (Bulletin No. 2, 1917, Bureau of Education).

Leonard: *Essential Principles of Teaching Reading and Literature.*

Newbolt: *Report on the Teaching of English in England.*

Tomkinson: *The Teaching of English.*

Articles in "*The English Journal*" and other journals.

**HISTORY:**

(a) A study of topics difficult of presentation in the prescribed history.

(b) A discussion of the courses in history that are adapted for pupils of various ages, and of the corresponding methods of teaching.

(c) A study of the method of research in history. The preparation of short monographs on assigned topics.

*Books of Reference:*

Johnson: *The Teaching of History.*

Allen: *The Place of History in Education.*

Dunn: *Social Studies in Secondary Education* (Bulletin No. 28, 1918, Bureau of Education)

Hasluck: *The Teaching of History.*

Keatinge: *Studies in the Teaching of History.*

Articles in "*The Historical Outlook*" and other journals.

Simpson: *Supervised Study in History.*

Tryon: *The Teaching of History in Junior and Senior High Schools.*

**MATHEMATICS.**

43. *Arithmetic.*—A brief study of present-day movements in Arithmetic; the fundamental changes in the purpose and method of teaching arithmetic; the content selected for teaching; and the relation of arithmetic to the life of the child.

The origin of number; the various steps involved in the development of the number idea; the unit, its nature and use; the necessity for standard units; number, a ratio.

Methods: Analysis and synthesis, induction and deduction, illustrated and applied, the use of concrete material and apparatus; use of graphic methods; drill and devices to secure neatness, accuracy and rapidity of computation; importance, place, and treatment of mental arithmetic. Checking and verifying of results in arithmetic.

The value of problems; selection of problems; interest in problems for which the pupils themselves furnish the materials; where and how to assist pupils; type solutions; the unitary method, its merits and limitations; solutions by full analysis and by performing only necessary operations.

## DETAILS OF COURSES.

Fractions: (a) vulgar, different interpretations; numeration and notation; operations; conditions under which these operations can be performed; measures and multiples; (b) decimal; as special fractions and as complements of common notation; correspondence of methods with those of integers. Approximations.

Compound rules; tables of weights and measures; reduction; operations.

The metric system, when and how it should be taught.

Square root by factoring and by the formal method, illustrated geometrically and algebraically.

Commercial arithmetic: how to make topics like discount, stocks, exchange, etc., concrete to the pupil; use of tables in calculating interest, discount, taxes, etc.; commercial and business forms.

Mensuration; the application of arithmetic to space relations; theoretical and practical methods of obtaining formulae; practical problems to show the use of these formulae; the necessity of models in teaching mensuration.

*Algebra.*—Arithmetical algebra; transition from arithmetic to algebra; generalization of language and of method; the introduction and defining of symbols; the negative quantity; the simple rules; the distributive law, commutative law, index law, sign rule; the equation and its place in algebra; factoring; highest common factor and lowest common multiple; use of detached co-efficients; classes of simple equations; symmetry and its applications in elementary algebra; square root; method of dealing with problems and the object to be kept in view in their solution; verifying and checking results; correlation of algebra and geometry; graphical methods of illustrating formulae and of interpreting the roots of equations.

The theory of fractional and negative indices; surds and surd equations; quadratic equations of one and two unknowns; theory of quadratics; simple ratio and proportion.

*Geometry.*—Practical geometry to precede the theoretical; use of instruments; paper folding; necessity for accuracy; distinction between practical geometry and geometrical drawing; practical problems in the solution of triangles and in measuring heights and distances; limitations of appeals to the concrete; value of experimental proofs; need of clear and definite conceptions of the fundamental truths; the place of the definitions and axioms; when and how they should be introduced; the proposition; home-work and class-work; the analytic-synthetic method of dealing with propositions and deductions; the comparative values of propositions and deductions; the comparative values of propositions and exercises; how to get pupils to work original exercises; necessity of original work from the beginning of theoretical geometry; the indirect method of demonstration; methods of class teaching; importance of note-books for pupils' exercises; the grouping and relating of propositions; practical applications; algebraic solutions; Euclid's method compared with modern methods; method of



## DETAILS OF COURSES.

teaching the more important propositions and exercises in Book I of the authorized text.

*Books of Reference:*

*Public School Manual in Arithmetic.*

McMurry: Special Method in Arithmetic.

Schultze: The Teaching of Secondary Mathematics.

Smith: The Teaching of Elementary Mathematics.

Suzzallo: The Teaching of Primary Arithmetic.

Young: The Teaching of Mathematics.

## SEMINAR IN MATHEMATICS.

44. The seminar in Mathematics will discuss methods in Trigonometry and the more advanced parts of Algebra and Geometry; the order of presenting the parts of these subjects so as to secure the most logical and impressive relation among the parts; the relations of the subjects themselves, the place of the teacher in dealing with more mature minds; the history and development of such special topics as the algebraic equation, the vulgar and decimal fraction, loci, maxima and minima, theory of parallel lines, etc.; examinations in mathematics, their purpose, when they should be held, the character of the paper, methods of marking, etc.

*Books of Reference:*

Howell: A Foundation Study in the Pedagogy of Arithmetic.

Fink: A Brief History of Mathematics.

Schultze: The Teaching of Secondary Mathematics.

Articles in "School Science and Mathematics".

## GEOGRAPHY.

45. Scope and Method of Geography. Relationship to other subjects of the courses of study; general methods of presentation with advantages and disadvantages of each method.

Regional Geography: Maps; different kinds, importance of each; map drawing; use of pictures, globes and other visual aids, use of text-books, readers, reference books; methods of treatment of typical regions.

Commercial Geography: Factors determining commerce; chief commercial commodities; geographical factors determining their production and distribution; relation of physical features to commerce, commercial geography of selected regions; methods of treatment of typical problems.

Physiography: Relation of physical to commercial and regional geography; importance of experimental work; use of such aids as contour, isobar, isotherm, and weather maps, interpretation of the physical geography of Ontario. A discussion of the method of treatment of topics difficult of presentation from the physical geography prescribed for the High Schools of Ontario.

# DETAILS OF COURSES.

## *Books of Reference:*

*Public School Manual: Geography.*

Wallis: *The Teaching of Geography.*

Chisholm: *Handbook of Commercial Geography.*

Lake: *Physical Geography.*

Andrew: *A Text-book of Geography.*

## SCIENCE.

46. The following are the main topics of the course:

A. Scope and value of the natural sciences; meaning of science and scientific method; educational value of science, inductive and deductive methods of investigation.

Experimental work; how conducted, how recorded; manipulation of apparatus; glass-working; making of simple apparatus; classroom discussion, its purpose, method, and relation to the experimental work; the use of text-books; note-books, method of inspection, drawing, reference books, most suitable books in each subject for the library; supplementary reading; methods in biology, physics, and chemistry of the Lower School, illustrated in lessons upon subjects difficult of presentation.

B. Laboratory equipment for the teaching of Elementary Science, and of Physics, Chemistry, and Biology; methods of demonstration; use of technical terms; theories, facts, scientific laws; text-books and reference books.

Chemistry: Order of treatment; introductory work. Methods of conducting instruction in Chemistry will be discussed, and illustrated in lessons upon subjects selected from such topics as the following: chemical laws and theories; valency; formulae and equations; nomenclature; qualitative and quantitative experiments; chemical arithmetic; the elements, with sodium and chlorine as types.

Physics: Methods of conducting instruction in the more difficult parts of the courses in heat, light, sound, magnetism, electricity, and mechanics will be discussed and illustrated in lessons upon subjects selected from such topics as the following: specific gravity, properties of liquids and gases, machines, temperature, specific heat, laws of reflection, images in mirrors and lenses, laws of vibrating strings with problems, interference of sounds, lines of magnetic force, relation between statical and current electricity, practical applications of electricity.

Biology: Dissection; experiments with plants; the microscope; aquaria and terraria; school museums; plant and animal ecology. Methods of

## DETAILS OF COURSES.

conducting instruction in biology will be discussed and illustrated in lessons upon subjects selected from such topics as the following: relation of structure to function, animal and plant types as the grasshopper, frog, hepatica, fern. This discussion will assume a practical acquaintance on the part of the student with the common plants and animals of Ontario.

*Books of Reference:*

*High School Manual: Suggestions for Teachers of Science.*

Burlend: First-Course in Zoology.

Gregory and Simmons. Lessons in Science.

Twiss: Principles of Science Teaching.

Lloyd and Bigelow: The Teaching of Biology.

Smith and Hall: The Teaching of Chemistry and Physics.

Woodhead: The Study of Plants.

## SEMINAR IN SCIENCE.

47. Manipulation: Practice with apparatus used in High School demonstrations; preparation of illustrative charts; the projection lantern; photography; preparation of lantern slides; care of aquaria and vivaria; growth of plants for experiments in vegetable physiology; collection and preservation of botanical and zoological material for Upper School work.

Equipment: Laboratory accommodation; arrangement of laboratories; lighting and ventilation; arrangement and structure of benches and other furniture; care and purchase of apparatus; chemicals and minerals, most suitable kinds, method of preparation and storage; reference works and periodicals in science for the High School library.

Methods of treating topics difficult of presentation in physiography, physics, chemistry, biology, mineralogy and geology discussed, and illustrated in lessons selected from the following topics: geological history of the Great Lakes in its relation to the physical features of Ontario; geographical significance of minerals and rocks, protection and colour of animals; Mendelism; plants in relation to insects; form and colour of flowers; parasitic and saprophytic plants; insectivorous plants; laws of combination in chemistry; symbols, formulae, and equations; valency; atomic and molecular theories; Boyle's Law; Charles' Law; electron theory of matter; absolute temperature; relation of acceleration, momentum, force, and energy; surface tension; flow of liquids.

*Books of Reference:*

Davis: Natural History of Animals.

Ganong: The Teaching Botanist.

Ganot: Text-book in Physics.

Kerner: Natural History of Plants.

Laboratory Accommodation, Pamphlet No. 9 of Department of Education of Ontario.

## DETAILS OF COURSES.

*Books of Reference:—Continued.*

Mann: The Teaching of Physics.

Mellor: Modern Inorganic Chemistry.

Twiss: Principles of Science Teaching.

U.S. Bureau of Education Bulletin 63, 1919: Natural Science Teaching in Great Britain.

U.S. Bureau of Education Bulletin 26, 1920: Reorganization of Science in Secondary Schools.

## SEMINAR IN AGRICULTURE.

48. The history of agricultural education, especially in Denmark, the United States and Canada; methods of conducting laboratory and plot work; relation of the course in agriculture to vocational education; laboratory work.

*Books of Reference:*

Barkett, Stevens and Hill: Agriculture for Beginners.

Manual of Elementary Agriculture and Horticulture

Marshall: Microbiology.

Plumb: Types and Breeds of Farm Animals.

Robinson: Principles and Practices of Poultry Culture.

Sanderson: Insects of Farm, Garden and Orchard.

Snydes: Soils and Fertilizers.

Warren: Elements of Agriculture.

Waters: The Essentials of Agriculture; Farm Management.

Note: Candidates for Specialists' certificates in Agriculture will take also the course in Science for High School Assistants.

## CLASSICS (LATIN AND GREEK).

49. The relation of method in teaching Latin or Greek to linguistic method in general; the effect of the object of teaching Latin or Greek upon the method in various departments, such as oral reading, grammar, translation, sight reading, and the literary or historical content; illustration of methods in typical lessons.

Pronunciation; oral reading, sight reading, and English translation as prescribed for Normal Entrance or Pass Matriculation; general principles of word-structure and sentence-structure; word order; methods of teaching the parts of a lesson; the direct method; topics of inflection and syntax as found in the Latin and Greek Books; special emphasis on difficult topics.

*Books of Reference:*

Bennett: The Teaching of Latin.

Chickering and Hoadley: Beginner's Latin by the Direct Method.

Crawford: On Pronouncing Latin.

Hale: The Art of Reading Latin.

## DETAILS OF COURSES.

Westaway: Quantity and Accent in the Pronunciation of Latin.

Bristol: The Teaching of Greek.

Thompson: Homeric Grammar.

Goodwin: Greek Grammar.

Goodell: Greek Grammar.

Arnold: On Translating Homer.

## SEMINAR IN CLASSICS.

50. In the seminar in Classics, topics are chosen germane to the teaching of Horace, Vergil, Cicero, Caesar, Xenophon, and continuous Latin prose composition. The following list will show the nature of the topics for discussion:

The teaching of Horatian metres; the poetic art of Horace; the translating of Horace into English prose; the use of metrical versions; certain Asclepiadean odes; the national odes; Horace's treatment of religion, death, friendship, and fortune; the selection of "fine lines"; the complete teaching of an ode of Horace; the appropriate commentary.

The teaching of Vergil in an honour class; the difficulties in translating Cicero; what T. Rice Holmes has done for the teaching of Caesar; the sequence of tenses in Caesar's indirect discourse; the teaching of Latin prose composition, the teaching of Xenophon in an honour class; the classical library.

The direct method in Latin and Greek.

*Books of Reference:*

Bennett and Bristol: The Teaching of Latin and Greek.

Johnson: Pamphlets on the Teaching of Caesar and Vergil.

Hale: Pamphlets on the Art of Reading Latin.

Articles in the "Classical Journal".

## FRENCH, GERMAN, OR SPANISH.

51. Introductory: Importance of the study of a modern language; aims of the study.

Study of Methods: A comparison of methods in view of the present conditions in the schools, *e.g.*, the age and attainments of pupils, the size of classes, allotment of time, text-books in use, regulations governing the teacher; illustrative lessons.

Pronunciation: Study of phonetics, theory and practice.

Elementary Classes: Classes conducted without a text-book; conversation lessons; how to make use of the objects of the classroom, pictures and drawings; unison work; variety and interest; dictation; note-books and their correction; picture lessons; necessity for thorough drill.

Grammar: Inductive and deductive teaching; grammatical rules and their value; special illustrative lessons on essentials.

Translation into English: Importance; aims; methods of conducting

# DETAILS OF COURSES.

the recitation. Special consideration of selected passages from the Reader and the Authors prescribed for Junior Matriculation.

Composition to be based on models; free reproduction; original essays; writing of letters; methods of correction; training in the use of the dictionary.

## *Books of Reference:*

- Bagster-Collins: The Teaching of German.
- Bahlsen: Teaching of Foreign Languages.
- Dumville: French Pronunciation.
- Heath: Report of the Committee of Twelve.
- Jespersen: How to Teach a Foreign Language.
- Palmer: Scientific Study and Teaching of Languages.
- Savory and Jones: Sounds of the French Language.
- Victor: German Pronunciation.

# SEMINAR IN FRENCH AND GERMAN.

52. The seminar will lay stress upon the consideration of the value, aims, and methods of linguistic training; the relation of linguistic training to literary culture; history of methods formerly employed in the teaching of modern languages in the secondary schools of France, Germany, Great Britain, and the United States; the necessity for better methods in Ontario; the Direct Method illustrated in the class-room; a study of French life, manners, and institutions; the importance of pronunciation; the value and use of phonetic symbols, use of phonetic charts and wall-pictures; typical lessons in advanced grammar, conversation, translation, sight reading, prose composition; free reproduction exercises, dictation, and audition; writing and correction of passages in French composition; consideration of books helpful to the teacher; the extent of the courses in the Upper School; writing essays on allotted subjects.

## *Books of Reference:*

- Bagster-Collins: German in Secondary Schools.
- Bahlsen: Teaching of Modern Languages.
- Brebner: Method of Teaching Modern Languages in Germany.
- Breul: Teaching of Modern Languages.
- Dumville: French Pronunciation.
- Geddes: French Pronunciation.
- Gouin: The Teaching and Studying of Languages
- Gouris: Teaching by the Direct Method.
- Jespersen: How to Teach a Foreign Language.
- Kittson: Theory and Practice of Language Teaching.
- Rippmann: Elements of Phonetics.
- Savory and Jones: Sounds of the French Language.
- Sweet: Practical Study of Languages.
- Walter: Zur Methodik des neu sprachlichen Unterrichts.

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## VOCAL MUSIC.

53. Tune: All intervals of the Major Diatonic Scale, both from the Tonic Sol-fa and staff; the relative minor; transition

Time: Whole pulse, continued pulse, silent pulse, and pulse divided into halves, quarters, and thirds with the various combinations of these in simple and compound duple, quadruple, and triple times. All the above in both the Tonic Sol-fa and staff notations.

Ear-training in Time and Tune: Recognition of rhythm and tone, of short musical phrases when played or sung, and their expression in either notation.

Voice-culture: Breath-control, tone production, vowel-formation, enunciation of consonants, correct intonation, blending of registers, and general training for quality, range, and flexibility.

Sight-singing: Singing from pointing on modulator or staff. Singing at sight easy passages containing the varieties of time and tune mentioned above.

Songs: The study of songs, in one or two parts, suited to the requirements of pupils in various school grades; with special attention to accent, enunciation, phrasing, quality of tone and expression.

Notation: Elements of notation, both Tonic Sol-fa and staff; the formation of the major and minor diatonic scales; elements of modulation and transposition.

Vocal Physiology: Anatomy of lungs, larynx, and resonating cavities; comparison of abdominal, intercostal and clavicular methods of breathing; action of vocal chords in production of tone and of the various vocal registers; influence of resonating cavities upon quality of tone and vowel; care of voice in speaking and singing.

Methods: The grading of school music to suit the development of the pupils and the methods of teaching both systems.

*Books of Reference:*

*Cringan: The Educational Music Course.*

*Cringan: Teacher's Handbook of Tonic Sol-fa System.*

*Curwen: The Standard Course.*

*Curwen: The Teacher's Manual.*

*Hardy: How to Train Children's Voices.*

*Hulbert: Breathing for Voice Production.*

*Mason: How to Teach the Staff Notation.*

## SEMINAR IN HOUSEHOLD SCIENCE.

54. The development of Household Science; the relation of household science to the other subjects of the curriculum; its value and aims; household science in the Public School, in the High and Technical Schools and

## DETAILS OF COURSES.

in the University; accommodations and equipment for household science work in the various types of schools; courses of study; methods of instruction; use of equipment and note-books; use of text-books; discussion of selected parts of the High School course of study.

*Books of Reference:*

Ontario Public School Manuals: *Household Science for Rural Schools, Household Management, Sewing.*

Baldeston: *Housewifery.*

Baldt: *Clothing for Women.*

Cooley, Winthell, Spohr, Marshall: *Teaching Home Economics.*

Kinne: *Equipment for Teaching Domestic Science.*

## PHYSICAL CULTURE.

## 55. PRINCIPLES: (For men and women):

Anatomy: Bone, composition, classification; bones of upper extremity; bones of the vertebral column; bones of the head; bones of the abdomen and thorax; bones of the lower extremity. Joints: Classification and description of movable joints; importance of joints. Muscle: Varieties, origin, insertion and action. Digestive system, stomach, liver, etc. Circulatory system: heart, arteries, veins, etc. Respiratory system. Nervous system.

Physiology: Oxidation and waste; metabolism; blood, composition, quality, the heart beat; respiration, mechanism, changes in the lungs, in the tissues; nervous mechanism of respiration; physiology of muscle. Digestion; digestive juices; function of saliva; gastric juice, pancreatic juice, and bile; succus entericus; changes in the food in the alimentary canal; lymph, movements; absorption. Nutrition; comparison of income and output of material, animal heat; diet.

First Aid to the Injured: Shock, wounds, bleeding, burns, exposure to cold, frostbite, fractures, sprains and dislocations, restoration of the apparently drowned, choking, foreign bodies in eye or ear, unconsciousness, fainting, apoplexy, heatstroke, poisons, bandaging.

## Personal Hygiene.

## PRACTICE: (For men only):

Calisthenics. Dumb-bells—Roberts, Barton, combinations; wands—elementary, Barton, miscellaneous; clubs—class club-swinging.

Elementary Exercises on Apparatus: Horse: vaults, flank, front, rear, screw, squat, straddle, wolf; mats: jumps and hops, jumps and hops with turns, underswings, underwings with turns, buck, vaults, same as on horse and vaulting bar.

Indoor Games: Course to enable teachers to coach and referee the following games: basketball, indoor baseball, volleyball.



## DETAILS OF COURSES.

Outdoor Athletics: Field and track sports. Course to enable teachers to coach athletics and to direct athletic meets, starting, sprinting, running, broad jump, high jump, shot put, hurdles.

Boxing and single sticks, bayonet exercises; squad and company drill; rifle and musketry practice and skirmishing, saluting, signalling; instruction in use of subtarget.

Swimming: Elementary.

Mutual instruction in the various exercises.

PRACTICE: (For women only):

Squad drill, marching tactics, wheeling, turnings.

Freehand exercises, including Strathcona Trust exercises; dumb-bell drills, elementary, advanced; wand drills, Barton; Anderson's twist drill; clubs, classified exercises.

Elementary exercises on the following apparatus: horse, mats, vaulting bar, buck, rings, Swedish stall bars, suspended ladder.

Indoor Athletic Sports: Running races, gymnasium games, including basket-ball; schoolroom and playground games.

Dancing: Technique of dancing, simplified athletic dances; folk dances and singing games; old English country dances.

Swimming: Elementary.

Mutual instruction in the various exercises.

*Books of Reference:*

*The Syllabus of Physical Exercises for Schools.*

Barton: Physical Training.

Bancroft: Games for Playground, Home, School and Gymnasium.

Burchenal: Dances of the People.

Burchenal: Folk Dances and Singing Games.

Chalif: Chalif Text-book of Dancing.

Corsan: The Diving and Swimming Book.

## ART.

## THEORY AND PRACTICE.

## 56. A. REPRESENTATION.

(1) *Pencil and Charcoal Drawing:*

The proper handling of the lead pencil and charcoal.

The principles of drawing, (1) in outline, (2) in neutral tones to represent colour values, and light and shade.

The principles of elementary perspective.

The study of the effects of light and shade and shadow.

The study of the laws of composition in the pleasing arrangement of objects in small groups.

## DETAILS OF COURSES.

Freehand drawing, above and below the eye level, in outline, and in neutral tones, (1) from common manufactured objects of curvilinear and of rectilinear form, and (2) from natural forms, as flowers, fruits, plants, trees, insects, animals, etc.

Freehand drawing from memory.

(2) *Blackboard Drawing:*

Practice in making rapid sketches on the blackboard to ensure its use by the student-teacher in teaching other subjects of school study besides art.

(3) *Modelling:*

Modelling in clay and in plasticine of simple forms.

Casting in plaster.

(4) *Water Colour Painting:*

The theory of colour; colour perception; spectrum standards; properties of colour (hue, value, intensity); colour harmony (complementary, analogous, contrasted, and monochromatic scales).

Construction of colour charts.

Brushwork in monochrome.

Water colour painting from common manufactured objects, and from natural forms, of a single object and of small well-composed groups.

## B. DESIGN AND LETTERING.

(1) *Decorative Design:*

The principles of decorative design.

The use of geometric and of natural forms in design.

The making of decorative designs and applying them to useful purposes.

The completion of decorative designs in balanced neutral tones and in harmonious colour schemes.

(2) *Lettering.*

The principles of lettering.

Lettering with the freehand and with mechanical aids.

The adaptation of lettering in exercises in applied design.

## C. ART APPRECIATION AND THE HISTORY OF ART:

Pictorial Composition: The essential artistic qualities of pictures—in line, tone, and colour:

The study of masterpieces. Essays.

Illustration of given themes.

Visits for study to the Museum and the Gallery of Art.

The study of home and school furnishings and decoration.

An outline of the History of Art.

## DETAILS OF COURSES.

## D. METHODS OF TEACHING ART IN HIGH AND CONTINUATION SCHOOLS.

The Regulations of the Department of Education.

The real objects to be sought in the teaching of Art, involving a consideration of its relation to the life of the student and to the interests of the community.

The organization and equipment of classes.

The care of materials and of drawings.

The courses of study. A natural order and method of development of the subjects and the principles of these courses.

Methods of teaching form (including proportion and perspective), tone, colour, composition, decorative design, handling of mediums, and the appreciation of pictures.

The preparation of studies for class work.

The division of the time given to Art. The correlation of Art with other studies.

Conducting examinations in Art. Points to stress in criticising and valuing drawings

A discussion of teaching difficulties and methods of overcoming them.

A description of teaching helps and information as to how and where they may be secured.

*Books of Reference:*

*Ontario Teachers' Manual: Art.*

Branch: Illustrated Exercises in Design.

Caffin: A Guide to Pictures.

Caffin: How to Study Pictures.

Cross: Colour.

Cross: Light and Shade.

Low: Composition.

Hatton: Perspective.

Norton: Freehand Perspective and Sketching.

Prang's Art Education for High Schools.

Reinach: Apollo—Story of Art throughout the Ages

Seaby: Blackboard Drawing.

Simonds: Modelling in Clay and Wax.

Strange: Handbook of Lettering.

Taylor: Elementary Art Teaching.

## COURSE FOR ORDINARY CERTIFICATES IN HOUSEHOLD SCIENCE.

### PURPOSE

The course for Interim Ordinary certificates in Household Science prepares candidates therefor in the theory and art of organizing, governing, and instructing in Household Science the pupils of the Public, Separate, and High Schools of Ontario.

### CONDITIONS OF ADMISSION

A candidate for admission to the course for the Interim Ordinary certificate in Household Science should make application, not later than September 30th, on a form to be obtained from the Secretary of the Ontario College of Education and should submit with this application:

- (1) A certificate from a competent authority that she is a British subject.
- (2) A certificate from a clergyman or other competent authority that she is of good moral character.
- (3) A certificate from a physician that she is physically able for the work of a teacher and, especially, that she is free from serious pulmonary affection and from defective eyesight or hearing.
- (4) A statement signed by herself to the effect that she intends, when opportunity offers, to teach the subject of Household Science.
- (5) One of the following:
  - (a) A Second-Class or First-Class Public School or an Ordinary High School certificate.
  - (b) A Kindergarten-Primary or a Kindergarten Director's certificate together with Normal Entrance, Faculty Entrance, or equivalent certificates under other names.

### FEES

- (1) The annual fee, which shall include tuition, laboratory supplies, and the use of the library shall be \$25.00.
- (2) At the beginning of the session, a deposit of \$4.00 will be required from each student. This deposit, less the cost of equipment and apparatus that may have been destroyed, will be returned at the close of the session.
- (3) If a student who has been granted an Ordinary Certificate teaches the subject of Household Science in a school in the Provincial system during the year following the examination, the fee of \$25 will be returned to her on the report to the Minister of Education by the Inspector of Household Science that the work has been satisfactorily performed. Applications for such refunds should be made to the Deputy Minister of Education.

COURSES IN HOUSEHOLD SCIENCE—*Continued.*

## COURSE OF STUDY

The Course of Study for the Ordinary certificate in Household Science includes the following:

## PART I

## FOODS

*Economics.*—Marketing; points to be considered in selection; factors determining cost; saving of materials, fuel, and labour in preparation; care in the home; utilization of left-overs.

*Food Values.*—Composition of foods; requirements to maintain the body in health; factors influencing diet; digestion of foods; menu planning; diets for infants, children, and adults; special diets for use in the home care of the sick.

*Preparation*—Scientific principles underlying methods of preparation; application of these principles by preparing food materials; practical and theoretical demonstration work; meal preparation (children's meals, home meals, the rural school lunch, etc.).

Table Service and Manners.

Special Schoolroom Methods.

## CLOTHING

*Selection.*—Origin and manufacture of cotton, linen, wool, and silk; their properties and value in relation to their manufacture; identification of textile materials (names, widths, prices, uses).

*Construction.*—Handsewing (constructive processes applied to simple articles); use and care of sewing machine and its attachments; use of home and commercial patterns; cutting and making of simple garments.

*Care.*—Daily, weekly, and seasonal; removal of stains; repairing.

Special Schoolroom Methods.

## HOUSEHOLD MANAGEMENT

*The House.*—Planning; furnishing; care (study of reagents, cleaning of metals, woods, textiles, laundry work); demonstrations; household administration (problems and technical procedures in the management of the modern home).

*Sanitation.*—Effect of environment on health; sanitary control of surroundings; disposal of waste.

*Home Nursing.*—Care of the infant, child, and adult; emergencies; bandaging.

Special Schoolroom Methods.

COURSES IN HOUSEHOLD SCIENCE—*Continued.*

## ELEMENTARY APPLIED SCIENCE

Chemical composition and reaction of household materials; physiological values of foods and changes which they undergo in digestion, putrefaction, etc.; testing of water, carbohydrates, proteins, fats, vegetables, flours, cereals, baking powders, beverages, etc.

## GENERAL METHODS IN HOUSEHOLD SCIENCE

Aims in teaching Household Science; scope of Household Science; relation to other subjects; methods of presentation in different types of schools; planning of courses; equipment; cost of lessons, etc. General discussions.

## PART II.

Observation and Practice-teaching will be provided in the Public and High Schools of Toronto and will include a minimum of six practice lessons per student with an equal number of periods for observation lessons.

## EXAMINATIONS

(1) Candidates for Ordinary certificates shall pass in each of Parts I and II under the following conditions:

## (a) Part I.

The following shall be the subjects in Part I with the maximum value for each subject:

Foods	(200)
Clothing	(200)
Household Management	(200)
Elementary Applied Science	(100)
General Methods in Household Science	(100)

The standing of candidates in the subjects of Part I will be determined by the sessional records and the final written examinations.

The sessional records, to which shall be allotted one-half the maximum value assigned above to each subject, shall consist of the daily credits and of the results of oral, written, and practical tests given throughout the session.

The final written examinations, to which shall be allotted the remaining half of the maximum value assigned above to each subject, shall include the following papers:

- Foods, 2 papers.
- Clothing, 2 papers.
- Household Management, 2 papers.

COURSES IN HOUSEHOLD SCIENCE—*Continued.*

Elementary Applied Science, 1 paper.

General Methods in Household Science, 1 paper.

The pass standard in Part I shall be 50% of the marks assigned to each subject.

(b) Part II.

The standing of candidates in Part II shall be determined wholly by the sessional records. For this purpose the maximum value assigned to practice lessons shall be 300, and to observation lessons, 100.

The pass standard in Part II shall be 60% of the aggregate of the marks for the practice lessons and for the observation lessons respectively.

(2) (a) Candidates who pass in Part II and fail in not more than two subjects of Part I will be exempted from further attendance.

(b) All other candidates who fail to obtain the necessary final standing will be required to attend another session, beginning after the Christmas vacation.

(3) (a) Candidates who are exempt from attendance under (2) (a) above may complete their standing for a certificate by taking, at one annual examination, or, separately, at different annual examinations the examination, written or practical or both, in the subject or subjects in which they failed.

(b) The pass standard for candidates not in attendance will be the same as that for candidates in attendance, but no allowance will be made for sessional work in the case of those not in attendance.

## CERTIFICATES

A candidate who takes the subjects and passes the examinations therein prescribed above shall be entitled to an Interim Ordinary Household Science certificate which shall be valid in these subjects in any Public, Separate, or High School of the Province, and will be made Permanent on the report of the Inspector or Inspectors concerned that the holder thereof has taught successfully the subjects thereof for at least two years.

The Interim Certificate may be renewed under conditions satisfactory to the Minister.

## COURSES FOR DEGREES IN PEDAGOGY

The Ontario College of Education offers courses of instruction for the degrees in Pedagogy during the regular College Sessions and during Summer Sessions.

### DEGREES OF BACHELOR OF PEDAGOGY (B.PAED.)

The degree of Bachelor of Pedagogy (B.Paed.) will be awarded under the following conditions:

1. The candidate shall hold an approved degree in Arts, Science, Agriculture, Engineering, or Commerce.

2. The candidate shall be in attendance at the Ontario College of Education during two regular College Sessions or three Summer Sessions. A High School Assistant's, or First Class, or Second Class certificate valid in Ontario or a regular course in an approved training school for teachers will be accepted in lieu of attendance during one of these regular sessions or one of the Summer Sessions.

3. The course shall consist of three subjects to be taken in any order and to be selected from the following:

Group A.—Science of Education, Educational Psychology.

Group B.—History of Education, Educational Administration.

Not more than two of these subjects shall be taken during a regular Session and not more than one during a Summer Session.

Candidates who, under Section 2 above, are exempted from attendance during one regular Session or one Summer Session will be exempted also from the instruction and examination in one of the three subjects, provided that the degree be awarded only to candidates who have taken the instruction and examinations in at least one subject in each of the two groups of subjects.

4. The examinations shall be held in May at the University of Toronto or in any other locality in the Province chosen by the candidate and approved by the Senate and under a presiding examiner appointed by the Senate, provided the candidate thereat defray the cost of the local examinations. The candidate shall send notice not later than the 15th day of March of his intention to take the examinations and of the locality he has chosen for such examinations.

5. The fee for registration is \$5. The fee for the Summer Session is \$10, the fee for the regular Session, which shall include the examination and library fees, is \$25. The fee for examination is \$3 for each subject. The fee for the degree is \$20. All fees shall be paid to the Bursar with the application for registration or examination, as the case may be.



6. The standard for a Pass degree shall be 60 per cent. of the marks assigned to each subject. The candidate who obtains 60 per cent. of the marks of each subject, and 66 per cent. of the aggregate of marks, shall be awarded a degree with Second Class Honours. The candidate who obtains 60 per cent. of the marks of each subject and 75 per cent. of the aggregate of marks shall be awarded a degree with First Class Honours. On the report of the instructors concerned, a maximum of 40 per cent. of the marks in any subject may be assigned to the term work of the candidate.

7. Subjects of Instruction and Examination.

(a) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

(b) Educational Psychology. (Two papers.)

(c) The History of Education in Western Europe and North America in modern times, with special reference to Ontario, Great Britain, and the United States. (Two papers.)

(d) Educational Administration in Great Britain, the United States, France, and Germany, with special reference to the administration and organization of education in Ontario (Two papers.)

DEGREES OF DOCTOR OF PEDAGOGY (D.PAED )

The degree of Doctor of Pedagogy (D.Paed.) will be awarded by the School of Graduate Studies under the following conditions:

1. The candidate shall hold an approved degree in Arts or Science or in the applied sciences of Agriculture, Engineering, or Commerce.

2. The candidate shall be in attendance at the Ontario College of Education during three regular College Sessions or four Summer Sessions. A High School Assistant's, First Class, or Second Class certificate valid in Ontario, or a regular Course in an approved training school for teachers will be accepted in lieu of the attendance during one of these regular Sessions or one of the Summer Sessions.

3. The Course shall consist of the four subjects and a thesis as defined in Sections 5 and 7. The subjects may be taken in any order, provided that not more than two be taken in any regular Session and not more than one in any Summer Session. Candidates who, under Section 2, are exempted from attendance during one regular Session or one Summer Session will be exempted also from the instruction and examination in one of the four subjects.

4. The examinations shall be held at such times and under such conditions as to date of application, place of examination, percentages, etc., as obtain with the Bachelor's degree.

5. The candidate, after passing the prescribed examinations, shall also submit on or before March 1st a thesis on some educational topic selected with the approval of the Ontario College of Education. In valuing this thesis literary excellence, as well as the discussion of the subject, will be taken into account. After the examiners have reported in favour of the candidate's examinations and thesis, and before the degree of D.Paed. is conferred, the candidate shall furnish the Secretary of the School of Graduate Studies with twenty-five copies of the thesis.

6. The fee for registration, if not already registered in the B.Paed. Courses, is \$5. The fee for the Summer Session is \$10; that for the regular Session, which shall include the examination and library fees, \$25. The fee for examination is \$3 for each subject. The fee for the degree is \$25. All fees shall be paid to the Bursar with the application.

7. Subjects of Instruction and Examination.

(a) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

(b) Educational Psychology. (Two papers.)

(c) The History of Education in Western Europe and North America in modern times, with special reference to Ontario, Great Britain, and the United States. (Two papers.)

(d) Educational Administration in Great Britain, the United States, France, and Germany, with special reference to the administration and organization of education in Ontario. (Two papers.)

## EDUCATION FELLOWSHIPS

Four fellowships of not less than \$500 each are offered annually to teachers who undertake to pursue graduate work in Education leading to the degree of D.Paed. or Ph.D. On the recommendation of the instructors concerned these fellowships may be renewed for a second year. Applications for these fellowships should be addressed to the Dean of the Ontario College of Education not later than June 1st of each year.



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FACULTY OF FORESTRY

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## BACHELOR OF THE SCIENCE OF FORESTRY

### ENTRANCE REQUIREMENTS

A candidate for admission to the First Year in the Faculty of Forestry must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him credit in the following subjects of Pass and Honour Matriculation.

### PART I—PASS MATRICULATION

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

Any three of:

LATIN (Authors and Composition)

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition)

EXPERIMENTAL SCIENCE (Physics and Chemistry) *or*

AGRICULTURE

### PART II—HONOUR MATRICULATION

ENGLISH (Literature and Composition)

MATHEMATICS (Algebra, Geometry and Trigonometry)

Any one of.

LATIN (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition).

In selecting the options it is recommended that students take French or German in Part II.

Admission may also be secured by candidates who (1) possess a degree in Arts from any Canadian, British or American university of approved standing; (2) come from other institutions whose certificates are recognised by the University of Toronto as equivalent to the above entrance requirements, and will be accepted *pro tanto*; or (3) have completed a year, or the examinations for the year, with satisfactory standing, in the Faculties of Arts, Medicine or Applied Science.

In addition to the academic requirements, a robust physique and good eyesight are essential in the practice of the profession, and candidates markedly deficient in these will be advised not to proceed. Deficiency in eyesight will be found a particular handicap in future practical employment.

*Occasional Students* may be admitted to not more than three forestry subjects.

#### REGISTRATION AND ENROLMENT

Applications for admission, together with matriculation or equivalent certificates, should be forwarded to the Registrar of the University at as early a date as possible.

Students must complete their registration in person on or before the first day of the session, September 29th. On the same or the preceding day students will enrol with the instructors in their various courses.

Students who have not complied with the regulations for registration and enrolment may be admitted only upon petition to the Faculty and for good reasons. They may be refused enrolment with classes unless the head of the department is satisfied that they are able to go on with the class. A charge will be made for late registration.

#### REGULATIONS RELATING TO STUDENTS IN ATTENDANCE

No student will be enrolled in any year, or be allowed to continue in attendance, whose presence is deemed by the Council of the Faculty to be prejudicial to the interests of the University.

Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

Unless special permission is granted by the Council, a student who, at the close of two sessions in the University, has failed to secure standing in his year, will not be permitted registration in the Faculty of Forestry.

The Students' Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power, subject to the approval of the Caput, to deal with violations of the regulations governing conduct.

Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities, after application by the Executive of the Students' Administrative Council, will be severely disciplined.

All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Caput.

A student who is under suspension, or who has been expelled from a College or from the University, will not be admitted to the University buildings or grounds.

The constitution of every University society or association of students in the Faculty of Forestry and all amendments to any such constitution

must be submitted for approval to the Council of the Faculty. All programmes of such societies or associations must, before publication, receive the sanction of the Council of the Faculty through the President. Permission to invite any person not a member of the faculty of the University to preside at or address a meeting of any society or association must be similarly obtained.

The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

### FEEs

#### *Regular Students in Forestry*

First, Second, Third and Fourth Years. Annual fee, including instruction, main library, laboratory supply, and one annual examination, \$125.00

If paid in full in October..... . \$125.00

By instalments:—

First instalment, if paid in October .... 63.00

Second instalment, if paid in January..... . 64.00

#### *Occasional Students*

The fee for occasional students is \$5.00 for the term for each course taken.

### *Penalties*

After October 31st, a penalty of \$1.00 per month will be imposed upon tuition fees until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply.

Students attending Fall Practice Camp will be allowed until November 15th to pay fees. Fees for Practice Camp, however, are due September 29th

### *General Fees*

Supplemental Examinations..... 10 00

Admission ad eundem statum..... 10 00

Degree of B.Sc.F..... 10 00

Degree of F.E..... 20 00

To defray expenses of the practice camp a deposit of approximately \$50.00 will be required from Fourth Year students.

#### *Foresters' Club and Athletic Association*

Annual fee..... \$2 00

Fee, Forestry Athletic Association.. 2.00

#### *Hart House, Students' Administrative Council and Physical Training*

Hart House, annual fee..... \$8.00

Students' Administrative Council, annual fee .... 3.00

Physical Training, annual fee, First and Second  
Years only..... 5.00

Every male student in attendance, proceeding to a Bachelor's degree in the Faculty of Forestry, is required to pay to the Bursar before December 1st the annual fee of eight dollars for the maintenance of Hart House. If this fee is not paid by the above date a penalty of two dollars will be imposed, making the total fee ten dollars.

Every male student in attendance proceeding to a Bachelor's degree in the Faculty of Forestry is required to pay to the Bursar at the time of the entry of his name with the Registrar the annual fee of three dollars for the maintenance of the Students' Administrative Council.

All fees are payable in advance.

A student may not be admitted to any of the University lectures or laboratories who is in arrears for his fees.

A student is responsible for complete fees for the year, even for partial attendance, unless he submits a written statement of his withdrawal to the Dean. Any candidate for a degree must pay full fees for the year in which he is in attendance upon any one or more courses.

#### ATHLETIC ASSOCIATION

University Athletics are under the entire control of the University of Toronto Athletic Association, the Executive body being the Athletic Directorate. This consists of:

- The President of the University
- Two members of the Faculty, appointed by the President
- Two Graduates, appointed by the Athletic Advisory Board
- The Medical Director and the Financial Secretary (*ex-officio*)
- Five Undergraduates, elected annually
- An Undergraduate representative, appointed by the Executive of the Students' Administrative Council

The Directorate alone has the power to sanction the use of the name "The University of Toronto" in connection with athletics, and no athletic event can be held in the University without its approval. It has control of the Athletic Field, the Gymnasium, the Swimming Pool, and other conveniences in connection with Athletics in Hart House, and is empowered by the Board of Governors to make the necessary arrangements to effect the carrying out of the University regulations requiring Physical Training.

#### DEGREES

The satisfactory completion of the four-year course leads to the degree of Bachelor of the Science of Forestry (B.Sc.F.).

The Faculty of Forestry grants the degree of Forest Engineer (F.E.) to the graduates holding the degree of B.Sc.F., who, after three years' employment in forestry work, present an acceptable thesis, the details to be arranged and the subject to be previously approved by the Faculty.



## SCHOLARSHIPS

## THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIP

A Scholarship of the value of two hundred dollars has been established by the Alumni Federation of the University from the War Memorial Fund to be awarded to a student in the Faculty of Forestry.

The general basis on which the above scholarship may be awarded is as follows.

- (a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918.
- (b) Standing in course of studies
- (c) Need of assistance.
- (d) Such other general qualifications of merit as may commend themselves to the Committee

Information regarding this scholarship may be obtained from the Secretary Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made.

Forestry graduates are eligible as candidates for the 1851 Exhibition Science Research Scholarship. Information with regard to this is given on pages 73 and 75 of the calendar of the Faculty of Arts.

## PHYSICAL TRAINING

By order of the Board of Governors each male student proceeding to a degree must take Physical Training in the first and second years of his attendance. He must first undergo a medical examination by the Physical Director of the University in order to determine the character of his training.

It is specially desired that students obtain training in swimming.

## EXAMINATIONS AND STANDING

No student will be allowed to write on the annual examinations who has not paid all fees and dues for which he is liable. A student who fails to perform the work in his course in a manner satisfactory to his instructors will not be allowed to present himself at the final examinations except by special permission of the Council.

The standard for pass in these examinations in all courses, whether taken in the Faculty of Forestry or any other Faculty, is 50 per cent of the marks for each subject.

In making up the final standing of each candidate much consideration will be given to the character of his work through the term, including attendance, laboratory and field work, reports and term examinations.

Candidates who *fail* at the annual examinations in *more than two subjects* cannot proceed to the next year unless they have attained at least 70 per cent on the average in all other subjects, when their case will be specially considered.

Candidates who fail in one or two subjects at the annual examinations, only one of which may be a forestry subject, may be allowed to take supplemental examinations in such subjects. These supplemental examinations must be taken in Arts subjects in September at dates set by the Faculty of Arts, in forestry subjects before January 15th. Students who are prevented by fieldwork or by sickness from writing in September may be permitted to write in January.

Candidates are required to send to the Secretary of the Faculty at least three weeks before the date of supplemental examinations, notice in writing of their intention to take such examinations, and at the same time the fee of \$10 (both September and January supplemental examinations) must be paid to the Bursar, and no student will be allowed to write who has failed to pay this fee.

If a candidate fail to pass a supplemental examination in a subject which is not basic to other subjects, he may carry it upon petition until the next examination, but if it be a subject fundamental to a subject of the year to which he wishes to advance he must take the subject over again (and if he fail in any three subjects he will be obliged to repeat the year). A student failing in laboratory work must repeat the same.

No candidate for a degree will be allowed to pass into the next higher year who has not fulfilled all the requirements of the next lower year.

### INSTRUCTORS AND COURSES IN FORESTRY

Courses other than forestry are given in the Faculties of Arts, and Applied Science and Engineering.

C. D. HOWE, M.A., Ph.D.,

*Dean and Professor*

J. H. WHITE, M.A., B.Sc.F., Ph.D.,

*Associate Professor and*

*Secretary of the Faculty*

W. N. MILLAR, B.Sc., M.F.,

*Associate Professor*

T. W. DWIGHT, B.Sc.F., M.F.,

*Associate Professor*

### OTHER FACULTIES

F. B. ALLAN, M.A., Ph.D.,

*Professor of Organic Chemistry*

L. ALLEN, Ph.D.,

*Assistant Professor of French*

J. G. ANDISON, B.A., A.M., Ph.D.,

*Lecturer in French*

J. W. BAIN, B.A.Sc., F.I.C.,

*Professor of Chemical Engineering*

E. W. BANTING, B.A.Sc.,  
*Assistant Professor of Surveying*

E. F. BURTON, B.A., Ph.D.,  
*Associate Professor of Physics*

J. H. CAMERON, M.A.,  
*Professor of French*

J. R. COCKBURN, B.A.Sc.,  
*Associate Professor of Descriptive Geometry*

S. R. CRERAR, B.A.Sc.,  
*Assistant Professor of Surveying*

J. H. FAULL, B.A., Ph.D.,  
*Professor of Botany*

H. W. A. FOSTER, LL.B.,  
*Lecturer in Law*

L. GILCHRIST, M.A., Ph.D.,  
*Assistant Professor of Physics*

G. E. JACKSON, B.A.,  
*Associate Professor of Political Economy*

F. B. KENRICK, M.A., Ph.D.,  
*Professor of Chemistry*

A. MCLEAN, B.A.,  
*Associate Professor of Geology and Palaeontology*

H. A. MCTAGGART, M.A., B.A., Ph.D.,  
*Assistant Professor of Physics*

E. S. MOORE, M.A., Ph.D.,  
*Professor of Economic Geology*

W. A. PARKS, B.A., Ph.D.,  
*Professor of Geology*

A. L. PARSONS, B.A.,  
*Associate Professor of Mineralogy*

J. SATTERLY, M.A., D.Sc.,  
*Associate Professor of Physics*

J. E. THOMSON, B.A.Sc.,  
*Assistant Professor of Mineralogy*

E. M. WALKER, B.A., M.B.,  
*Associate Professor of Biology*

#### PLAN OF INSTRUCTION

The regular course leading to the degree of Bachelor of the Science of Forestry is a four-year course, the first two years of which are mainly devoted to the study of the fundamental subjects. The last two years are

mainly occupied with forestry subjects, there being also time allowed, especially in the last year, to add general educational subjects and to specialize in different directions under advice of the Dean.

Students are required to take either French or German and the language chosen must be continued for three years.

The courses are distributed through the four years as follows:—

*Note.*—Numbers after the subjects refer to numbers of the courses as designated in the Calendars of the Faculties of Arts, Forestry, and Applied Science and Engineering, according to the Faculty in which the course is given. The work is stated in terms of the number of lecture or laboratory periods per week.

### I YEAR

1. *Elementary Physics* (Arts 28). Two lectures and one laboratory period through the session.
2. *Elementary Chemistry* (Arts 1, 14). Two lectures and one laboratory period through the session.
3. *Elementary Botany* (Arts 5 and 6). Two lectures and two laboratory periods, first term.
4. *Elementary Zoology* (Arts 5 and 6). Two lectures and two laboratory periods, second term.
5. *French* (Arts, *Special*) or *German* (Arts 1b). Two lectures through the session.
6. *Elementary Forestry* (Forestry 1). One lecture through the session.
7. *Descriptive Dendrology* (Forestry 2a). Four hours laboratory work through the session; Saturday field work first term.

### SUMMER WORK

8. Employment in the field by Dominion or Provincial government or by private companies.

### II YEAR

1. *Elementary Organic Chemistry* (Arts 3). Two lectures through the session.
2. *Elementary Geology* (Applied Science and Engineering 195). Two lectures through the second term.
3. *Mineralogy* (Applied Science and Engineering 257 and 259). Twenty-five lectures and forty hours laboratory.
4. *Surveying, Plane, and Map Drawing* (Applied Science and Engineering 270, 271). One lecture and two laboratory periods through the session.
5. *French* (Arts, *Special*) or *German* (Arts 2b). Two lectures through the session.

6. *Forest Mensuration* (Forestry 7a). Two lectures and one half day field or office work through the session.
7. *Descriptive Dendrology* (Forestry 2b). Two hours laboratory work through the session.
8. *Biological Dendrology* (Forestry 5). Two lectures and four hours laboratory work through the session.
9. *Forestry Organizations of Canada* (Forestry 15). One lecture through the session.

#### SUMMER WORK

10. Employment in the field by Dominion or Provincial government or by private companies.

#### III YEAR

1. *Glacial Geology and Physiography* (Arts 13). One lecture through the session.
2. *Principles of Economics* (Arts 3e). Two lectures through the session.
3. *Commercial Law* (Arts 4e). One lecture through the session.
4. *Surveying, Topographical, and Map Drawing* (Applied Science and Engineering 272, 273). One lecture and three laboratory periods through the session.
5. *French* (Arts, *Special*) or *German* (Arts 3a). Three lectures through the session.
6. *Forest Mensuration* (Forestry 7b). One lecture and one laboratory period through the session.
7. *Silvics* (Forestry 9). Two lectures through the session.
8. *Silviculture* (Forestry 6a). Three lectures first term.  
*Silviculture* (Forestry 6b). Two lectures second term. One week at Provincial Forest Station and nursery.  
*Silviculture* (Forestry 6c). Fifteen hours laboratory work.
9. *Forest Utilization* (Forestry 8a). Three lectures through the session and ten days' trip to logging camp during the Christmas vacation, beginning December 22.

#### SUMMER WORK

10. Employment in the field by Dominion or Provincial government or by private companies.

#### IV YEAR

1. *Applied Chemistry* (Applied Science and Engineering 112). One lecture through the session.
2. *Plant Pathology* (Arts 25). Seventy-five hours lecture and laboratory work, second term.
3. *Economic Entomology* (Arts 37). Two lectures and two laboratory periods through the second term.
4. *Forest Organization* (Forestry 11). One lecture through the session; ten seminars, second term.

5. *Forest Valuation and Finance* (Forestry 12). One lecture through the session; theory and problems.
6. *History of Forestry* (Forestry 13). One lecture through the session.
7. *Forest Administration* (Forestry 14a and 14b). Two lectures through the session.
8. *Forest Protection* (Forestry 10a and 10b). Two lectures through the session and one week at practice camp at opening of session.
9. *Forest Utilisation* (Forestry 8b). One lecture through the session and one afternoon weekly for visits to wood-using plants.
10. *Forest Utilisation* (Forestry 8c). One lecture through the session.
11. *Forest Mensuration* (Forestry 7c). Three weeks field work at practice camp at opening of session.
12. *Wood Identification and Timber Physics* (Forestry 4a). Two lectures and six hours laboratory work first term.
13. *Wood Technology* (Forestry 4b). One lecture second term.
14. *Forest Geography* (Forestry 3). Two lectures through the session.

#### FIELD WORK

The Third Year students are required to spend a week or ten days of the Christmas vacation in lumber camps for the purpose of becoming acquainted with the methods of their management. A report on the results of such inspection visits will be required.

At or near the end of the spring term the Provincial Forest Station at St Williams, Ontario, will be visited for a week by the Third Year students in connection with the course in Silviculture. This work forms an integral part of the course and constitutes a requirement for the degree.

Six weeks at the beginning of the Fourth Year will be spent at the Forest School Practice Camp in Algonquin Park. During this time timber estimating, tree measurements, studies of rate of growth, forest description and forest survey, the making of working plans, and other practical woods work will occupy the students. The students must report at the Camp on September 29, 1925.

The students are required to pay their own expenses at the camp. Board is furnished at cost. Last year this averaged \$1 50 a day. The railway fares will amount to about \$20 from Toronto and return for the camp at the beginning of the Fourth Year. The visit to the logging camps in the Third Year costs about \$50, and the trip to the Provincial Forest Station at St. Williams approximately \$20.

#### DESCRIPTION OF COURSES

1. *Elementary Forestry*. The course is intended to give the student an understanding of the general principles of forestry as a science, an art, a business and a state policy, with applications to Canadian conditions. 25 hours. Prof. Howe.

2. *Descriptive Dendrology*. A taxonomic study (2a) of the native forest trees, and (2b) of important foreign timber trees and more commonly cultivated species, laying special stress on the characteristics which lead to the recognition of the species in the field, with practice work in securing familiarity with morphological and other characteristics for identification. 150 hours laboratory and 50 hours field work. Prof. White.

3. *Forest Geography*. The geographical distribution, botanical composition and character of forests of the world, and of Canada in particular, with special reference to the ecological factors, climate and soil, influencing forest growth. Field practice in recognizing forest types and in making forest descriptions at the practice camps. 50 hours. Prof. Howe.

4a. *Wood Identification and Timber Physics*. Wood structure with a view to identification of the different woods: physical and mechanical properties; relation of properties. 85 hours. Prof. White.

4b. *Wood Technology*. Technical properties and uses of Canadian woods and of their competitors, and of the commonly imported tropical woods. Statistical study of the lumbering and pulp and paper industries. 20 hours. Prof. White.

5. *Biological Dendrology*. Life history, laws of growth of trees, their dependence on ecological factors and silvicultural requirements of different species. Lectures and laboratory work. 150 hours. Prof. White.

6. *Silviculture*. (a) Principles and practice of the art of forest production and forest improvement, methods of natural reproduction. (b) Artificial regeneration and nursery practice. (c) Identification of tree seeds and seedlings. 75 hours and practice work. Prof. White.

7a. *Forest Mensuration*. Methods of ascertaining the contents of logs and trees, scaling, tree form, construction and use of volume tables, timber estimating. Lectures, recitations; field and office work. Two hours through the session and one half day of field or office work. Chapman's *Forest Mensuration* is used as a textbook. Prof. Dwight.

7b. *Forest Mensuration*. Methods measuring the growth and yield of trees and stands. One hour lecture and one laboratory period through the session. Chapman's *Forest Mensuration* is used as a textbook. Prof. Dwight.

7c. *Forest Mensuration*. Field practice in forest surveying, topographic mapping and timber estimating on a large scale, location of survey lines and corners, field methods of measuring logs and trees for volume and taper tables, stem analysis and growth measurements. Three weeks in fall practice camp in Northern Ontario. Prof. Dwight.

8a. *Forest Utilisation*. Organization of logging operations, methods of logging employed in various regions of Canada and the United States, minor woods industries related to lumbering, logging regions of Canada. Three hours through the session and ten days field work during Christmas vacation in a logging camp. Bryant's *Logging* is used as a reference. Prof. Millar.

8b. *Forest Utilization.* Equipment and operation of lumber manufacturing plants, pulp and paper mills, wood distillation, cooperage and box making, veneers and other important wood-using industries. One hour through the session and one half day for trips to typical wood-using plants. Prof. Millar.

8c. *Forest Utilization.* Seasoning and grading of lumber, timber preservation, fire proofing; the lumber industry, customs and usages, lumber shipping and inspection, lumber associations, timber appraisal. One hour lecture through one session and occasional visits to local lumber yards, dry kilns and timber-treating plants. Prof. Millar.

9. *Silvics.* The life history of the forest; influence of the environmental factors; the laws of invasion and succession, the basis of differentiation of forest types. 50 hours. Prof. Howe.

10a. *Forest Protection.* Methods of guarding against injury to forests by wind, frost, insects, trespass and other miscellaneous injurious agents; protection of forests from fire, organization of forest protection forces, cooperative forest protection in Canada, equipment, construction and use of forest improvements, roads, trails, telephone lines, lookout systems, aerial patrol, fire-fighting. Two hours of lectures through the session. Prof. Millar.

10b. *Forest Protection.* Construction, operation and maintenance of forest telephone lines, use of heliographs, flags, signal lanterns and wireless telephones in forest protection, signal codes, relation of system of communication to the organization of protection forces and the detection and suppression of forest fires. One week of lectures and field work at practice camp in Northern Ontario. Prof. Millar.

11. *Forest Organization.* Principles and methods underlying the preparation of working plans for continuous wood and revenue production. 35 hours. Prof. Dwight.

12. *Forest Valuation and Finance.* Methods of ascertaining money value of forest growths and application of the principles of finance to forest management. 25 hours. Prof. Dwight.

13. *History of Forestry.* Historical development of the economic and technical features of modern forestry at home and abroad. 50 hours. Prof. Howe.

14a. *Forest Administration.* Fundamental principles of administrative organization, selection and training of a forest personnel, civil service commissions, forest administrative organizations of Canada. Two hours of lectures for one term. Prof. Millar.

14b. *Forest Administration.* Laws and regulations under which forests are administered and protected by the Dominion Government and the various Provinces of Canada. One hour of lectures for one term. Forest Acts and Regulations of the Federal Government and the Provinces are used as texts. Prof. Millar.

15. *Forestry Organizations of Canada.* General outline of the work of the various organizations connected with the forestry movement in Canada. 25 hours. Prof. Howe.



## OPENINGS FOR FORESTERS

To meet the many inquiries of students contemplating the choice of forestry as a profession the following statements may serve:

Openings for foresters may be found in four or five directions, namely, government employ, private employ, private enterprise, teaching, and other business.

The Dominion Forestry Branch, which has charge of the Dominion timber lands in Alberta, Saskatchewan, Manitoba, part of British Columbia, and the unorganized territories, is employing graduates to do the technical work in exploring and classifying lands for forest reservations, surveying, mapping and determining contents of such reservations, organizing a forest fire service, controlling the grazing, timber sales and logging, and generally providing for an administration of forest reservations, of which there are now a dozen, under supervisors. These will have to work out the details of a forest management. The Forestry Branch maintains large nurseries from which tree material is distributed for planting in the prairies; a staff of experts attend to the growing and distribution of tree seedlings, and inspect the planting. Other field work with the Dominion Forestry Branch consists in silvicultural investigations. Statistical and technological investigations are carried on and results published at the main office in Ottawa and its Forest Products Laboratories at Montreal. Nineteen of our graduates are employed by the Dominion Forestry Branch.

The Provincial Forestry Branch of Ontario has charge of about 100,000,000 acres of forest lands and these are being gradually organized into districts for administrative purposes. The Branch maintains a Forest Station and large nursery at St. Williams, in Norfolk County, as well as subsidiary nurseries at Orono, Durham County, and at Midhurst, Simcoe County. At St. Williams there are extensive plantations. The Province has developed about thirty municipal and county forests, varying in size from a few acres to several thousand acres in extent. The Province is inaugurating an extensive reforestation programme for the waste lands in which eventually thousands of acres will be planted and this will require an increasing number of men trained in silvicultural work. At present the Provincial Forestry Branch employs thirty graduates of the School.

The Quebec government has for some time organized and developed a forest service, but it provides its own technical men.

A number of paper manufacturing companies have for some years availed themselves of the services of foresters, to survey, map and plan operations of their forest properties. Timber limit holders have employed such for similar purposes, and the time is not far distant when there will be a more general development in this direction. Fourteen graduates are in the employment of pulp and paper companies.

Besides the permanent employment for graduates by the Dominion Forestry Branch, the Ontario Forestry Branch, and by private companies, undergraduates find temporary employment during the summer vacation with all three of these organizations, chiefly in surveying, mapping and estimating work. The salaries for graduates are more or less standardized by the Dominion Civil Service. They begin at \$1,320 and pass rapidly to \$1,680, when advancement is slower. The more successful men reach \$3,000 to \$3,500 in about ten years. With these salaries, from the beginning, go certain allowances for expenses which materially increase their actual value. During the summer months the undergraduates receive from \$70 to \$100 per month, according to experience, exclusive of field expenses.

Altogether, however, it needs to be understood that there will always be only a limited demand for high grade professional men, at least for some time to come; and only those with a special love and aptitude for the arduous work which is largely involved should enter the profession.

Besides the directions above outlined as offering employment for foresters, the education of foresters is such as to prepare them for transferring readily into other employment, such as park superintendents, landscape architects, nursery work, horticulture, and lumberman's business in its various phases.



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FACULTY OF MUSIC

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## DEGREE OF BACHELOR OF MUSIC

The degree of Bachelor of Music (Mus. Bac.) will be conferred by the University of Toronto upon students of music, on compliance with the requirements of the curriculum in music which may from time to time be prescribed by the Senate.

## MATRICULATION

Notice is hereby given that beginning with the Session 1926-1927 complete pass matriculation will be required of the candidates in this Faculty.

The subjects for matriculation in Music for the session 1925-1926 will be English and two of: Greek, Latin, German, French, Italian or Spanish.

The courses of study prescribed for matriculation in each of these subjects will be found in the Curriculum for Matriculation, a copy of which may be obtained on application to the Registrar of the University.

A candidate for the degree of Bachelor of Music must complete his matriculation prior to admission to the examination of the final year.

Special application for Matriculation may be dealt with by the Senate.

## REGISTRATION

Every student shall, in each year of his course, register his name with the Secretary of the Faculty of Music not later than the first of November.

After the first of November registration can be effected only by petition to the Faculty and on payment of a fine of One Dollar a month for each month after October.

## UNDERGRADUATE COURSE

In addition to Matriculation the candidate must have passed three examinations before the degree of Bachelor of Music shall be granted.

## FIRST YEAR

1. Harmony in three and four parts.
2. Counterpoint in two and three parts.
3. The History of Music from 1600 to 1800.

## SECOND YEAR

1. Harmony in not more than four parts.
2. Strict Counterpoint (including the treatment of the various species in combination) in not more than four parts.
3. Double Counterpoint at the octave.
4. Canon in two parts.
5. Fugue as far as subject and answer.
6. The History of Music from 1800 onwards.
7. Musical Form as far as the simple forms and analysis of the musical sentence.

## FINAL YEAR

## A. THEORY OF MUSIC:

1. Harmony in not more than five parts, including some original work.
2. Counterpoint, strict and free, in not more than five parts.
3. Canon in two and three parts
4. Double Counterpoint at the octave, 10th, 12th and 15th.
5. Imitation and Fugue up to four parts.
6. A general survey of the History of Music from the earliest times to the present. (Text-books recommended, Bonavia Hunt's *History of Music* and Lavignac's *Music and Musicians*, but see also list on page 12.)
7. Elements of Acoustics.
8. Musical Form in general.
9. Orchestration.
10. Viva voce:—Analysis of full score, from standpoints of orchestration and form, of Beethoven's Symphony, No 7. (This work is available in the convenient form of the *Eulenburg Miniature Scores*.)
11. There will also be required an original composition, either sacred or secular, containing at least four movements and sufficiently long to occupy from fifteen to twenty minutes in performance. This must be

(a) A chorus in five parts, with an instrumental introduction of not less than thirty-two bars in binary form.

(b) A recitative and solo.

(c) A quartette or quintette for voices only.

(d) A four part vocal fugue.

Numbers (a), (b) and (d) must have accompaniments for string orchestra only, and candidates are advised to procure and study one or more works of classical string quartette type with special reference to the requirements of this accompaniment.

This composition must be sent to the Secretary of the Faculty not later than April 1st accompanied by a declaration that it is the candidate's own unaided work.

Candidates for the degree may defer presenting this composition until a subsequent annual examination, in which case the fee for examination shall be \$10.

#### B. PRACTICAL MUSIC:

Candidates shall be required to play—on the piano or some orchestral instrument—or sing:—

Two or three compositions (or portions of them), selected by the examiner. They shall also be required to play, at the keyboard, the following tests, etc.:—

1. Transposition.

2. Extemporization upon a given theme.

3. Modulation.

Equivalent tests will be imposed for singers, or players upon orchestral instruments.

In the case of those candidates who have obtained Licentiate standing in the University of Toronto or in the Toronto Conservatory of Music requirements (11) and (B) will not be exacted but there will be required instead a short original composition in one of the following forms:

(a) A Song for solo voice with Pianoforte Accompaniment.

(b) A Four-part Vocal Composition.

(c) An Instrumental Composition (other than a Dance) for the Pianoforte or Organ, or for any Stringed or Wind Instrument with Pianoforte or Organ Accompaniment.

The Senate may admit *ad eundem statum* undergraduates of other Universities after due inquiry as to the requirements demanded by the institutions in which the candidates obtained their standing.

## EXAMINATIONS

The examinations will take place at times to be fixed by the Senate.

Applications accompanied by the proper fee must be transmitted to the Secretary of the Faculty before the fifteenth of March. (Cheques should be made payable to the University of Toronto.)

The total number of marks necessary to pass on any subject is 60; second class honours, 70; first class honours, 80; maximum, 100.

## FEES

Matriculation.....	\$10 00
Registration and Lecture Fees (Annual) ...	\$5.00 each 10 00
Each examination subsequent to matriculation.....	10.00
For admission <i>ad eundem statum</i> .....	10.00
Degree of Mus. Bac .....	20.00
Lecture Fee for Occasional Students, \$2.00 for each subject, covering all subjects, fee.....	5.00



## SUGGESTED LIST OF TEXT-BOOKS

*Rudiments and Harmony:*

Musical Rudiments—Leo Smith (Boston Music Co.).

Rudiments of Music and Elements of Harmony—Albert Ham (Novello).

Elements of Harmony, Books i, ii and iii—Kitson (Oxford University Press).

Harmony—Prout (Augener).

The Evolution of Harmony—Kitson (Oxford University Press).

Harmony, Parts i, ii and iii—Anger (Boston Music Co.).

*Counterpoint:*

Primer of Counterpoint—Bridge (Novello).

Students' Counterpoint—Pearce (Winthrop Rogers).

Counterpoint—Prout (Augener).

The Art of Counterpoint—Kitson (Oxford University Press).

Modern Academic Counterpoint—Pearce (Winthrop Rogers).

*Double Counterpoint, Canon and Fugue.*

Primer of Fugue—Higgs (Novello).

Fugue—Prout (Augener)

Fugal Analysis—Prout (Augener).

Studies in Fugue—Kitson (Oxford University Press).

Double Counterpoint and Canon—Prout (Augener).

Double Counterpoint and Canon—Bridge (Novello).

*Form and Composition*

Form in Composition—Anger (Boston Music Co.).

Musical Form—Prout (Augener).

Composition—Stainer (Novello).

Musical Composition—Stanford (The Macmillan Co.).

Composition—Corder (Curwen)

Analysis of Form—Harding (Novello)

Analysis of Bach's 48 Preludes and Fugues—Iliffe (Novello).

Outlines of Musical Form—Ham (Novello).

*Orchestration:*

Primer of Instrumentation—Prout (Novello).

On Scoring for an Orchestra—Vincent (Vincent).

Instrumentation—Berlioz (Carl Fischer).

Choral Orchestration—Cecil Forsyth (H. W. Gray Co.).

*History:*

History of Music—Bonavia Hunt (Bell &amp; Sons)

History of Music—Naumann (Cassell &amp; Co.)

History of Music—Rockstro (Robert Coeks)

Summary of Musical History—Parry (Novello).

Evolution of the Art of Music—Parry (Keegan Paul).

The Growth of Music, Books i, ii and iii—H. C. Colles (Oxford University Press)

Music and Musicians—Lavignac (Henry Holt).

Modern Musicians—Hadden (T. M. Foulis).

Articles in Grove's Dictionary.

*Acoustics:*

Acoustics for Musicians—P. C. Buek (Oxford University Press).

Scientific Basis of Music—Stone (Novello).

Sound and Music—Sedley Taylor (The Macmillan Co.).

Science of Music—Sedley Taylor (The Macmillan Co.).

Sound—Tyndall (D. Appleton &amp; Co.).

Candidates are not restricted to the above list, which is only suggested.  
The paper work is judged irrespective of any particular author or school.

## DEGREE OF DOCTOR OF MUSIC

Candidates for the degree of Doctor of Music must be Bachelors of Music of this or another university of at least three years' standing. Every candidate shall register his name with the Secretary of the Faculty not later than the first of November.

Candidates must present a musical exercise by the first day of April for submission to the examiners in Music, the approval of which is a necessary preliminary to further examination.

The exercise must be of the nature of a Cantata, sacred or secular, scored for full orchestra, and requiring from 40 to 60 minutes for its performance. The cantata must include an overture and parts for one or more solo voices, in addition to choruses.

If the exercise be approved the candidate must undergo an examination of a more advanced character than is involved in the Mus. Bac. examination in Harmony, Counterpoint, Fugue, Musical Form, Orchestration, and Musical History.

The fee for the examination is fifty dollars, divided as follows: Reading exercise, twenty-five dollars; practical and theoretical examinations, twenty-five dollars.

The fee for the degree is thirty dollars.

The examinations will take place at times to be fixed by the Senate.

Applications accompanied by the proper fee must be transmitted to the Secretary of the Faculty before the first of April. (Cheques should be made payable to the University of Toronto).

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SCHOOL OF GRADUATE STUDIES

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## PLAN OF ORGANIZATION OF THE SCHOOL OF GRADUATE STUDIES

The constitution and functions of the School of Graduate Studies are determined by the following statute enacted by the Senate of the University of Toronto:

1. That there shall be established in the University of Toronto a School of Graduate Studies.

2. That there shall be a Council to be known as "The Council of the School of Graduate Studies".

3. That the Council shall consist of the President of the University, the Dean of the School, those members of the university faculties of professorial rank who are conducting or directing work of graduate character, and such others as may be appointed annually by the President. For the purposes of this section all the teaching staffs mentioned in the University Act (R.S.O. 1914, Chap. 279, Sec. 66) shall be included.

4. That the Dean, who shall be Chairman of the Council, and the Secretary of the School shall be appointed by the Board of Governors.

5. That subject to the limitations of Sections 7 and 8 of this Statute, the powers and duties of the Council shall be.

(1) To make rules and regulations for governing its own proceedings, including the determining of the quorum necessary for the transaction of the business of the Council and of the various committees and sub-committees.

(2) Subject to the provisions of the University Act, and to the approval of the Board of Governors, to make rules and regulations for the government, direction and management of the School and the affairs and business thereof.

(3) To fix and determine the courses of graduate study subject to the approval of the Senate.

(4) Subject to the approval of and confirmation by the Senate to appoint the examiners for and to conduct the examinations of the graduate courses and to determine the results of such examinations.

(5) To deal with and, subject to an appeal to the Senate, to decide upon all applications and memorials by students or others in connection with the School of Graduate Studies.

(6) To consider and report to the Senate upon such matters affecting the School of Graduate Studies as to the Council may seem meet.

6. That the general administration of the School shall be vested in its Council, from which an Executive Committee, consisting of the President, the Dean, and nineteen members shall be elected as follows:

- (1) Five members by each of the Councils of the Faculties of Arts, of Medicine, and of Applied Science and Engineering.
- (2) Two members by each of the Councils of the Faculties of the College of Education and of Forestry.

The persons so elected shall hold office for one year or until their successors are elected.

7. (a) That the five members of the Executive Committee of the School elected as in Section 6 as representatives of the Faculty of Arts shall constitute a sub-committee to administer the regulations governing the degree of Master of Arts. Similarly the five representatives of the Faculty of Medicine shall be a sub-committee to administer the regulations governing the degrees of Doctor of Medicine and Master of Surgery; the five representatives of the Faculty of Applied Science and Engineering a sub-committee to administer the regulations governing the degree of Master of Applied Science, Master of Architecture, Civil Engineer, Mining Engineer, Mechanical Engineer, Electrical Engineer and Chemical Engineer; the two representatives of the College of Education a sub-committee to administer the regulations governing the degree of Doctor of Pedagogy; and the two representatives of the Faculty of Forestry a sub-committee to administer the regulations governing the degree of Forest Engineer. These powers of administration shall extend to regulations relating to graduate courses, diplomas and degrees.

(b) The regulations governing the courses, diplomas and degrees mentioned in Section 7 (a) shall be determined and may be amended by the respective Councils whose representatives are entrusted with their administration, but such regulations shall become effective only after approval by the Council of the School and by the Senate of the University.

(c) No course of graduate instruction leading to the diplomas and degrees mentioned in Section 7 (a) shall be announced by the Council of the School until such course shall have been approved by the Council of the Faculty to which the Department offering such a course belongs, and it is understood that the existing relations of the Departments to the Faculties to which they belong remain unchanged.

(d) All recommendations for the granting of any of the diplomas and degrees mentioned in Section 7 (a) must be approved by the Council of the School for transmission to the Senate

8. (a) That each of the sub-committees mentioned in section 7 (a) as representing the Faculties of Arts, Medicine and Applied Science and Engineering shall choose annually from its members *three* persons, and each of the sub-committees representing the College of Education and the Faculty of Forestry shall choose annually *one* person and these *eleven* persons, together with the President, the Dean and *eleven* others selected from the Council of the School by the President shall constitute a com-

mittee to administer the regulations governing the degree of Doctor of Philosophy

(b) The regulations governing the degree of Doctor of Philosophy shall be determined and may be amended by the Council of the School of Graduate Studies, subject to the approval of the Senate of the University and all recommendations for the granting of the degree must receive the approval of the Council of the School for transmission to the Senate of the University.

(c) The Council of the School of Graduate Studies shall work in the closest co-operation with the Department or Departments concerned in the determination of the Graduate Courses mentioned in Section 8 (b), and in the acceptance and examination of candidates. Should the recommendation of a Department be rejected by the Council of the School of Graduate Studies, the Department may appeal to the Senate through the Council of the Faculty to which it belongs.

9. That the Council of the School is empowered, subject to the approval of the Senate, to make such adjustments in the composition of its Executive Committee as may seem to it desirable, if and when (a) by action of the Senate other degrees shall come under the jurisdiction of the Council of the School, or (b) by action of the Board of Governors other Faculties are established, the Councils of which entrust the administration of the regulations respecting their graduate degrees to the Council of the School of Graduate Studies.

## GENERAL REGULATIONS

## ADMISSION

1. Advanced courses of instruction and facilities for research are offered to students who are graduates of any University or College of recognized standing.

2. Admission to these advanced courses, or to the privileges of research, does not in itself imply admission to candidacy for a higher Degree.

## REGISTRATION

3. Application for registration as a graduate student must be made to the Secretary of the School of Graduate Studies not later than the 5th of October in any year, and the application must be accompanied by statements of the applicant's degrees, of the courses pursued as an undergraduate and his standing therein, and of the courses he wishes to pursue.

## DEGREES

4. The Degrees which the University of Toronto offers to graduate students are those of Doctor of Philosophy, Master of Arts, Doctor of Medicine and Master of Surgery, Master of Applied Science, Master of Architecture, Civil Engineer, Mining Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, Metallurgical Engineer, Doctor of Pedagogy and Forest Engineer.

REGULATIONS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

5. A candidate for the Degree of Doctor of Philosophy must have been regularly registered as a graduate student in this University in accordance with the provisions of Section 3. Registration must be repeated at the beginning of each year of the course.

6. The candidate shall, as a registered graduate student, have pursued in this University for at least three years, under the direction of some one department, an advanced course of study, which must be approved by the committee administering the regulations governing the degree of Doctor of Philosophy. Exemption from one of the three years required may be granted by the committee, on the report of the department concerned, to a candidate who has furnished satisfactory evidence of having pursued for at least one year a course of advanced study in his major subject



at another University, or who, at graduation as Bachelor of Arts in this University, has obtained First Class Honours in a special course, covering one year of advanced study approved by the committee.

It must be clearly understood, however, that the Degree is granted only to such students as give evidence of general proficiency, power of investigation and high attainments in the special field in which the major work is done.

7. A statement of the course of study proposed must be sent to the Secretary of the School of Graduate Studies not later than the 1st of November of the first year of registration and must be accompanied by the approval of the departments concerned.

8. The course shall include the study of a special subject, termed the major subject, and of two other subjects, termed the minor subjects. Only one minor subject shall be selected from the group of subjects of the department which includes the major subject. The time devoted to the two minor subjects should not exceed two-thirds of that required for the major subject.

9. The candidate must have an adequate knowledge of French and German. For special reasons the substitution of another foreign language for one of these will be permitted. In some departments a knowledge of Latin is also essential.

10. The candidate shall present, either during his course of study or at the completion of it, a thesis embodying the results of an original investigation, conducted by himself, on some approved topic selected from his major subject.

11. The acceptance of the thesis shall be determined by the committee administering the regulations governing the degree of Doctor of Philosophy on the report of the department which includes the major subject. This report shall state, in terms to be approved by the Council, whether the thesis complies with the conditions prescribed by this University, and, in the judgment of the department, is worthy of publication, and whether the department recommends that the thesis be accepted in conformity with the requirements for the Degree of Doctor of Philosophy.

12. The candidate shall undergo examinations in his major and minor subjects conducted by the departments in which he is enrolled. The departments shall be responsible to the Council for the conduct of these examinations; and when the candidate shall have fulfilled all the requirements of the departments concerned in respect of the major and minor subjects and the thesis shall have been recommended for acceptance in accordance with regulations 10 and 11, the departments in which the candidate is registered shall so report to the Council.

13. When the departmental reports called for in regulations 11 and 12 shall have been received and the Committee administering the regulations governing the Degree of Doctor of Philosophy shall have accepted the

thesis, the candidate shall be required to give an exposition of his thesis and to defend it before a specially appointed committee of the Council.

All members of the Council shall have the right to be present at this examination and to take part in it. The special committee to which the conduct of this examination is assigned shall be appointed by the Dean of the School of Graduate Studies in consultation with the Head of Department in which the candidate has taken his major subject. At least one member of the committee shall be appointed from a department other than those in which the candidate has taken his major and minor subjects. The committee, through the Dean or his representative, shall report the result of the examination to the Council.

14. Before the Degree is conferred upon a candidate he must, subject to the approval of the committee administering the regulations governing the degree of Doctor of Philosophy, make such arrangements as will ensure the publication of the thesis, and the presentation within a specified time of such number of copies as the committee may direct. Each printed copy shall, on its title page, contain the words "A thesis submitted in conformity with the requirements for the Degree of Doctor of Philosophy in the University of Toronto".

15. On the report of the Council of the School of Graduate Studies that all the requirements have been complied with, the Senate may, either at a Convocation or at any one of its regular meetings, confer on the candidate the Degree of Doctor of Philosophy.

#### REGULATIONS FOR THE DEGREE OF MASTER OF ARTS

16. A candidate for the Degree of Master of Arts must have been regularly registered as a graduate student in this University in accordance with the provisions of Section 3. Should the course of study extend over more than one year registration must be repeated at the beginning of each year.

17. If not registered as a graduate student at the beginning of the academic year, as provided in the regulations given above, the candidate shall not be eligible for the degree in the following June.

18. A statement of the course of study or the subject of the thesis proposed, must be sent to the Secretary of the School of Graduate Studies not later than the 1st of November, and must be accompanied by the approval of the department or departments concerned.

19. Attendance during at least one session is obligatory on candidates for the Master's Degree; but dispensation from such attendance may be granted to graduates of the University of Toronto if the department or departments concerned, from direct knowledge of the candidate's attainments, recommend such dispensation on special grounds.

20. A candidate will proceed to the Degree under one or the other of the following sets of regulations according as he is a Bachelor of Arts in an Honour Course or a Bachelor of Arts in the Pass Course. If accepted as a

candidate, a graduate of another University or a graduate of a faculty other than that of Arts, shall be assigned, on the basis of his qualifications, for the purpose of this clause, to one or the other of these classes.

### I. BACHELOR OF ARTS IN AN HONOUR COURSE.

Candidates may qualify for the Degree:

(a) By the pursuit for at least one year of an approved course of study and the passing of a satisfactory examination therein. A course of study shall not be approved unless (1) it is a continuation of a course previously pursued for graduation, or (2) it has been recommended by the department concerned on account of other special qualifications possessed by the candidate. In this latter case the course will normally extend over at least two years.

(b) By presenting a thesis embodying the results of some special study or investigation and adjudged to be of sufficient merit. The thesis shall be accepted only on the approval of the department or departments concerned. The candidate shall be required to pass an examination, written or oral, or both written and oral, conducted by the department or departments concerned, on the subject of the thesis and on his general knowledge of the subject of the department or departments. This examination shall not be held earlier than six months after the date of registration, and two printed or typewritten copies of the thesis submitted must be presented to the Secretary of the School of Graduate Studies at least two weeks before the examination takes place. If the candidate is to be eligible for the degree in June the thesis must be presented not later than the 1st of May.

### II. BACHELOR OF ARTS IN THE PASS COURSE.

Candidates may qualify for the Degree.

(a) By the pursuit for at least two years, under the direction of one department, of an approved course of study and the passing of a satisfactory examination therein. No course of study shall be approved unless it is based on courses which have been taken for at least three years in the undergraduate course.

(b) Under exceptional circumstances only, a Bachelor of Arts in the Pass Course may be permitted to proceed to the degree of Master of Arts by thesis, in accordance with the regulations in clause 20, I (b). Candidates must be of at least two years' standing as Bachelor of Arts.

Graduates in Arts of this University, who have fulfilled all the requirements for the Degree of Doctor of Philosophy may, on payment of the fee for the Degree of Master of Arts, be admitted to that Degree without further examination. Graduates in Arts of another University, or graduates in other Faculties of this or another University, who have fulfilled all the requirements for the Degree of Doctor of Philosophy may, on special recommendation to that effect by the departments concerned, also be admitted to the Master's Degree without further examination, on payment of the fee for that Degree.

REGULATIONS FOR THE DEGREE OF  
DOCTOR OF MEDICINE AND MASTER OF SURGERY

The Degrees which the University of Toronto offers to graduate students in Medicine, are those of Doctor of Medicine (M.D.) and Master of Surgery (Ch.M.).

Before a candidate will be eligible to register for these degrees he must have fulfilled the following entrance requirements:

(1) Graduated in Medicine from a recognized University.

(2) Spent one year in a Hospital as an Interne on a rotating service or its equivalent. (Two years general practice may be accepted as the equivalent of this).

*Length of Course:*

The course will be normally of three years' duration of twelve months each.

Three years or more in general practice may be accepted as equivalent to one of the clinical years of the course. One full year's special work in one of the required laboratory subjects of the course may be accepted as equivalent to the laboratory year of the course. A graduate having the B.Sc. (Med.) will be considered as having fulfilled this requirement. In very exceptional cases both of the above alternatives may be allowed.

*The Course will consist of:*

*First Year (Clinical).*

One year's instruction in Medicine or Surgery.

This may be taken while the student is acting as a Hospital Interne in the selected clinical subject. (This is in addition to the internship on a rotating service.)

At the end of the first year the candidate must present a certificate to the School of Graduate Studies from the Physician or Surgeon in charge of the service in which the candidate has worked, stating the nature and details of the work done, and the degree of efficiency with which it has been carried on.

*Second Year (Laboratory).*

One year's instruction in a laboratory subject.

The student will devote the major part of his time for this year to work in one of the following laboratory departments and the minor part to work in any other two of these departments:

- (a) Anatomy.
- (b) Physiology.
- (c) Biochemistry.
- (d) Pathological Chemistry.
- (e) Pathology.
- (f) Bacteriology and Immunology.
- (g) Pharmacology.
- (h) Physics.

At the end of the second year proceeding to the degree of M.D., the candidate must pass a written and oral examination in the major and two minor subjects he has elected to take.

At the end of the second year proceeding to the degree of Ch M., the candidate must pass a written and oral examination in the following subjects.

- (a) Pathology, including Bacteriology.
- (b) Anatomy.
- (c) Principles of Physiology.

A candidate failing in either the written or oral examination in his major subject must repeat the year before being considered eligible for re-examination. A candidate failing in not more than one of his minor subjects may apply for a Supplemental in that subject in which he has failed.

#### *Third Year (Clinical).*

One year's instruction in Medicine or Surgery.

One of the clinical years in the course for the Surgical Degree may be spent in the Department of Obstetrics and Gynaecology.

This clinical year may be taken while holding a hospital appointment in the selected clinical department.

At the end of the third year proceeding to the degree of M.D. or Ch M., the candidate must present a certificate to the School of Graduate Studies from the Physician or Surgeon in charge of the service on which he has worked, stating the nature and details of the work done and the degree of efficiency with which it has been carried out.

The third year of the course must be taken at the University of Toronto in all cases.

Candidates in Medicine or Surgery, besides being familiar with the general field of the subject, must be able to make:

- (a) A satisfactory examination of the Eye, Ear, Nose and Throat.
- (b) A satisfactory pelvic examination.
- (c) A satisfactory routine laboratory examination.

Candidates must present a satisfactory thesis and pass an examination in the subjects of instruction at the end of the course. Candidates proceeding to the Ch.M. must pass an examination in General Surgery.

#### REGULATIONS FOR DEGREES OF MASTER OF APPLIED SCIENCE, MASTER OF ARCHITECTURE, CIVIL ENGINEER, MINING ENGINEER, MECHANICAL ENGINEER, ELECTRICAL ENGINEER, CHEMICAL ENGINEER, METALLURGICAL ENGINEER

A. The regulations governing the Degrees of Master of Applied Science and Master of Architecture for the session 1925-26 shall be determined as follows:

1a. A candidate for the degree of Master of Applied Science shall hold the degree of Bachelor of Applied Science of this University or a degree from some other University recognized as equivalent by the Council of the School of Graduate Studies.

1b. A candidate for the degree of Master of Architecture shall hold the degree of Bachelor of Architecture or the degree of Bachelor of Applied Science in Architecture of this University or a degree from some other University recognized as equivalent by the Council of the School of Graduate Studies.

2. He shall register with the Secretary of the School of Graduate Studies at the beginning of the academic year.

3. Not later than November 1, 1925, he shall submit to the Secretary for acceptance by the Council of the School of Graduate Studies the title of his proposed thesis as approved by the department concerned.

4. Not later than April 30th, 1926, he shall present evidence to the Council of the School of Graduate Studies that he has spent not less than one academic year of the department concerned as a student enrolled in one of the following departments on a course of study approved by the department: Civil Engineering, Mining Engineering, Mechanical Engineering, Architecture, Chemical Engineering, Electrical Engineering, Metallurgical Engineering.

5. Not later than April 30, 1926, evidence that the candidate has satisfactorily met all the requirements of the department with regard to thesis and to such examinations as the department shall require, shall be forwarded to the Council of the School of Graduate Studies through the sub-committee administering the regulations governing the degrees of Master of Applied Science and Master of Architecture.

B. The regulations governing the Professional Degrees of Civil Engineer (C.E.), Mining Engineer (M.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Chem.E.), Metallurgical Engineer (Met.E.), for the Session 1925-26 shall be determined as follows.

1. A candidate for one of the said degrees shall hold the diploma of the School of Practical Science or of the Faculty of Applied Science and Engineering or the degree of Bachelor of Applied Science.

2. He shall have spent at least three years after receiving the diploma or the degree in the actual practice of the branch of engineering wherein he is a candidate for a degree.

3. Intervals of non-employment, or of employment in other branches of engineering, shall not be included in the above three years. It shall not be necessary that the several periods requisite to make up the said three years be consecutive.

4. Satisfactory evidence shall be submitted to the University Examiners as to the nature and length of the candidate's professional experience for the purpose of clauses 2 and 3.

The examiners may satisfy themselves by oral or written examinations in regard to the candidate's experience and competence.

5. The candidate shall prepare an original thesis on some engineering subject in the branch in which he wishes a degree, the said thesis to be accompanied by all necessary descriptions, details, drawings, bills of quantities, specifications and estimates.

The candidates may be required at the option of the examiners to undergo an examination in the subject of this thesis.

6. Notice in writing shall be sent to the Secretary not later than the first day of November, informing him of the degree to which the candidate wishes to proceed and of the title of his proposed thesis for the approval of the Examiners.

7. The evidence under clause 4, and the thesis, with accompanying papers, described in clause 5, shall be sent to the Secretary not later than the first day of April.

8. The candidate shall be required to present himself for examination in the month of April at such time as may be arranged by the Examiners.

9. The thesis, drawings, and other papers submitted under clause 7 shall become the property of the University.

10. Nothing in this statute shall prevent any candidate from receiving more than one of the said degrees, provided he has the necessary qualifications for each degree. An interval of three years must elapse between the granting of any two degrees under this statute.

### REGULATIONS FOR THE DEGREE OF DOCTOR OF PEDAGOGY

The degree of Doctor of Pedagogy (D.Paed.) will be awarded under the following conditions:

1. The candidate shall hold an approved degree in Arts or Science or in the applied sciences of Agriculture, Engineering, or Commerce.

2. The candidate shall be in attendance at the Ontario College of Education during three regular College Sessions or four Summer Sessions. A High School Assistant's, First Class, or Second Class certificate valid in Ontario, or a regular Course in an approved training school for teachers will be accepted in lieu of the attendance during one of these regular Sessions or one of the Summer Sessions.

3. The Course shall consist of the four subjects and a thesis as defined in Sections 4 and 5. The subjects may be taken in any order, provided that not more than two be taken in any regular Session and not more than one in any Summer Session. Candidates who, under Section 2, are exempted from attendance during one regular Session or one Summer Session will be exempted also from the instruction and examination in one of the four subjects.

4. The candidate, after passing the prescribed examinations, shall also submit on or before March 1st a thesis on some educational topic selected with the approval of the Ontario College of Education. In valuing this thesis literary excellence, as well as the discussion of the subject, will be taken into account. After the examiners have reported in favour of the candidate's examinations and thesis, and before the degree of D.Paed. is conferred, the candidate shall furnish the Secretary of the School of Graduate Studies with twenty-five copies of the thesis.

5. Subjects of Instruction and Examination.

(a) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

(b) Educational Psychology. (Two papers.)

(c) The History of Education in Western Europe and North America in modern times, with special reference to Ontario, Great Britain, and the United States. (Two papers.)

(d) Educational Administration in Great Britain, the United States, France, and Germany, with special reference to the administration and organization of education in Ontario. (Two papers.)

## REGULATIONS FOR THE DEGREE OF FOREST ENGINEER

The Faculty of Forestry grants the degree of Forest Engineer (F.E.) to the graduates holding the degree of B.Sc.F., who, after three years' employment in forestry work, present an acceptable thesis, the details to be arranged and the subject to be previously approved by the Faculty.

## FEES

### Doctor of Philosophy:—

Registration and tuition....	.....first year	\$25.00
Registration and tuition	...(second and third years)	45 00
Examination...	.....	25 00
Degree ..	.....	25 00

If the course is extended over more than three years a registration fee of \$5 00 for each additional year is required.

### Master of Arts:—

Registration and tuition.....	..... first year	\$25 00
Each subsequent year.....	.....	5 00
Examination.....	.....	10.00
Degree.....	.....	10 00



Candidates for the Degree of Master of Arts shall pay \$25.00 for registration and tuition for one year of the course. If the course is extended over more than one year a registration fee of \$5.00 must be paid for each additional year.

Graduate Students not proceeding to a degree—

	For the Session	For the Term
For a course in any one subject, including registration.	\$10 00	\$5.00
For a course in more than one subject, each subject including registration.....	9 00	5.00
Maximum Fee.....	45.00	23.00

If any or all of the courses taken by a Graduate student are later accepted by the Council of the School of Graduate Studies as part of the student's course of instruction for the Degree of Master of Arts or Doctor of Philosophy, an additional fee shall be charged, if necessary, to bring the total fees paid for registration and tuition up to the amount paid by a candidate registered for the Degree of Master of Arts or Doctor of Philosophy.

The fee for registration shall be paid by the candidate immediately upon being notified of admission to the course.

If the candidate is required to repeat either examination an additional fee of \$10.00 will be charged.

Doctor of Medicine:—

Master of Surgery:—

Instructional fee for all students enrolled for these Degrees who are not holding University or Hospital appointments in this University..... per annum	\$150.00
Registration fee for all students enrolled for these Degrees who are holding University or Hospital appoint- ments in this University per annum	5.00
Examination.....	10.00
Degree.....	10.00

Master of Applied Science:—

Examination and Degree.....	\$25.00
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Master of Architecture.—

Examination and Degree.....	\$25.00
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Professional Degrees:—

Civil Engineer  
Mining Engineer  
Mechanical Engineer  
Electrical Engineer  
Chemical Engineer  
Metallurgical Engineer

Examination and Degree.....	\$20 00
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## Doctor of Pedagogy:—

Registration.....	\$5 00
Tuition, examination, library. ....	10 00
Summer Session.....	10.00
Examination.....each subject	3.00
Degree.....	25.00

## Forest Engineer:—

Examination and Degree.....	\$20.00
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## Graduate Students' Union:

Annual Fee. ....	\$1.00
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## FELLOWSHIPS

The University offers annually to qualified students intending to pursue advanced graduate study a number of fellowships, each amounting to \$500, the holders of which will, for the year of their tenure, be entitled to free tuition. Some are confined to special Departments, but those specified in paragraph (1.) below are open to students in all Departments, who are proceeding to the degrees of M A. and Ph.D. Others are called Tutorial Fellowships because the holders of them are required to give a certain amount of instruction in the class-room or laboratory in elementary subjects, but the time so devoted is small and, accordingly, the holders are given opportunity to pursue their special advanced courses of study.

These Fellowships are as follows:

1. SPECIAL OPEN FELLOWSHIPS.

By the generosity of the Canadian Pacific Railway, the Imperial Oil Company, The Robert Simpson Company, Colonel R. W. Leonard and Sir Edward Kemp, there are seven Fellowships available to students who undertake to pursue graduate work in any of the courses offered by the Departments of this University for the degrees of M A. and Ph.D. under the authority of the School of Graduate Studies. The value of each Fellowship is \$500 for one year with free tuition. If the holder of a Fellowship gives satisfactory evidence of progress in his work during the year he may receive the renewal of it for a second year. Preference will be given to candidates who are graduates of the Universities of Canada outside Ontario. Applications, together with details of undergraduate courses taken and certificates therefor, should be addressed to the Dean of the School of Graduate Studies not later than the 1st of June.

2. THE UNIVERSITY OF TORONTO WAR MEMORIAL FELLOWSHIP.

The War Memorial Fellowship, established by the Alumni Federation of the University of Toronto, is open to graduates (men or women) of approved Canadian universities enrolled in, or intending to enroll in, the School of Graduate Studies for the purpose of proceeding to a degree in any department of this University. Application form, accompanied by official statement of undergraduate standing, must be sent to the Secretary-Treasurer of the Alumni Federation, University of Toronto, before May 15th, 1925.

3. SPECIAL DEPARTMENTAL FELLOWSHIPS.

(a) Alexander Mackenzie Research Fellowships, two in number, of \$500 each, for research in the Departments of Political Science and History, awarded to graduates of any university, on the recommendation of the committee. Applications for these Fellowships should be addressed to the Head of the Department not later than the 1st of June.

(b) James H. Richardson Fellowship, of \$500, awarded in Anatomy by the Senate on the recommendation of the Professors of Anatomy, Biology and Surgery. Applications for this Fellowship should be addressed to the Professor of Anatomy.

(c) The George Brown Memorial Fellowship, of \$500, awarded in alternate years to the graduate in Medicine of the University of Toronto, who has distinguished himself most in the subjects of Anatomy, Physiology, Biochemistry, Pharmacology, Pathology and Pathological Chemistry, in the undergraduate course. The holder of the Fellowship is expected to devote himself to research in one of the laboratories of the University on some subject bearing on the advancement of medical science.

(d) The Ellen Mickle Fellowship, being the annual income from an endowment of twenty-five thousand dollars (\$25,000) has been established by the late Dr. W. J. Mickle, to be given to the student (or students) who in the examinations at the end of the fourth year of the Old Course or the fifth year of the New Course in Medicine, shall have taken honours of the first class in at least three-fourths of the subjects of that year, and shall have obtained the highest marks in the examinations. The award will be made to the above referred to student (or students) provided he proceed to the degree of Bachelor of Medicine in this University and spend one year in post graduate study approved by the Council of the Faculty of Medicine.

#### 4. MEDICAL RESEARCH FELLOWSHIPS.

These were established in 1913 through the generosity of a number of the leading citizens of Toronto, for the promotion of Clinical and Laboratory Research in the Department of Medicine. Each is tenable for three years, providing that the progress in research made by the holder is satisfactory. The value of the Fellowships for the first year is \$750, and in the senior years may be as much as \$1,000 and \$1,500. Applications for these Fellowships should be addressed to the Secretary of the Medical Research Fellowship Committee.

#### 5. THE NIPISSING MINING COMPANY RESEARCH FELLOWSHIP

The Nipissing Mining Company has endowed a Research Fellowship in the Department of Mining Engineering to be known as The Nipissing Mining Company Research Fellowship, of the annual value of eleven hundred dollars (\$1100). This fellowship is open to graduates of any University. Applications for this Fellowship should be addressed to the Secretary of the School of Graduate Studies not later than September 1st of each year.

#### 6. EDUCATION FELLOWSHIPS.

Four fellowships of not less than \$500 each are offered annually to teachers who undertake to pursue graduate work in Education leading to the degree of D.Paed. or Ph.D. On the recommendation of the instructors concerned these fellowships may be renewed for a second year. Applications for these fellowships should be addressed to the Dean of the Ontario College of Education not later than June 1st of each year.

## 7. TUTORIAL FELLOWSHIPS.

There are eight of these Fellowships, the holders of which are required to give part of their time to elementary instruction in the class-room or laboratory, and are also to engage in advanced study and research.

These Fellowships are annually awarded in the following Departments: three in Mathematics, three in Physiology and Biochemistry, four in Pathology, and two in Botany.

These Fellowships are open to graduates of any University and the appointments to them are made, on the recommendation of the staffs in the respective Departments, by the Board of Governors.

## DEMONSTRATORSHIPS, ASSISTANT DEMONSTRATORSHIPS, AND ASSISTANTSHIPS

Certain of the Departments of Science offer annually to qualified graduates of any University positions as Demonstrators, Assistant Demonstrators, or Assistants, which involve instruction to elementary laboratory classes, but only a certain number of hours per week in each case is required, and the instructors are accordingly free to pursue advanced study and research with the object of qualifying for the degrees of M.A. and Ph.D.

The number of these posts varies from year to year, but for the session 1924-1925 they were, according to Departments, as follows:

Physics, 10 Assistant Demonstratorships; Chemistry, 11 Assistantships; Botany, 6 Assistantships; Pathological Chemistry, 3 Assistantships; Biochemistry, 2 Demonstrators, 4 Fellows; Physiology, 1 Demonstrator, 12 Fellows.

Applications for these positions should be addressed to the Head of the Department in each case. The honorarium is \$500 or more.

## GRADUATE STUDENTS' UNION

All students registered in the School of Graduate Studies are thereby members of the Graduate Students' Union, and all resident students must pay the annual fee of \$1.00 for the support of the activities of the Union.

**ANNOUNCEMENT OF COURSES OF GRADUATE  
STUDY OFFERED BY THE DEPARTMENTS OF  
THE FACULTY OF ARTS**

In the following announcement of courses certain Minors are suggested as suitable to accompany each of the major subjects. In many cases students are advised to take the Minors indicated, but it is always to be understood that other Minors may be arranged by consultation between the student and the staffs involved.

## CLASSICS

The departments included under the Classics are four in number: Greek, Latin, Greek and Roman History, Comparative Philology and Sanskrit.

## DEGREE OF MASTER OF ARTS

Before being accepted as a candidate for the degree of Master of Arts an applicant must have done the equivalent of the Third Year Honour work in both Greek and Latin, and the equivalent of the Fourth Year Honour work in either Greek or Latin.

After the above requirements have been met, a candidate may be registered for M.A. work in the language in which the Fourth Year work has been done.

Students who, under the direction of the Classical staff, are taking courses to enable them to meet the above requirements may be registered as graduate students not proceeding to a degree.

## DEGREE OF DOCTOR OF PHILOSOPHY

A graduate student, proceeding to the degree of Doctor of Philosophy, may select any one of the following divisions as his Major:

Greek Literature.

Latin Literature.

Greek and Roman History.

Greek and Roman Philosophy.

Comparative Philology and Sanskrit.

All candidates for the degree of Doctor of Philosophy whose major subject lies within the Classics shall give evidence of proficiency in Greek and Latin Prose Composition, or (with the consent of the staff in Classics) in one or other of them, and to this end shall take such courses as the staff may prescribe.

A graduate student will be required, before entering upon more advanced courses, to have taken such of the courses marked below by an asterisk as the staff in Classics may recommend, having regard to the range of work already completed and to the nature of the course of study he expects subsequently to pursue.

No absolute rule is laid down as to the selection of the Minors to be chosen by a candidate whose Major is in one of the classical departments, but one of them at least should be chosen from the remaining subjects in these departments, and the other, if chosen from some different department should have a definite relation to the candidate's major subject. Where both minor subjects are chosen from the departments included under the Classics, one half of the courses constituting the two minor subjects should consist of courses not marked by an asterisk.



## COURSES OF INSTRUCTION

## I. GREEK.

- \*1—Greek Prose Composition.
  - \*2—Plato, Republic, Bks. I-IV.
  - \*3—Plato, Republic, Bks. V-X.
  - \*4—Greek Drama (Aeschylus, Agamemnon; Sophocles, Electra, Oedipus Rex, Euripides, Iphigenia in Tauris, Aristophanes, Birds, Clouds.)
  - \*5—Aristotle, Ethics, Bks. I-IV, X (6-9).
  - \*6—Aristotle, Poetics.
  - \*7—History of Greek Philosophy (Introductory Course).
    - 8—Plato, Phaedrus, Phaedo, Gorgias. Professor Hutton.
    - 9—Plato, Laws. Professor Hutton.
    - 10—Greek Tragedy. Professor Owen 1925-26.
    - 11—Aristophanes. Professor Adams.
    - 12—Aristotle, Ethics, Bks. V, VI, VII. Professor Bielt 1925-26.
    - 13—The Educational Theories of Plato. Professor Robertson 1926-27.
    - 14—The Political and Ethical Thought of Plato. Professor Robertson 1926-27.
    - 15—Homer. Professor Hamilton.
    - 16—History of Greek Philosophy from Plato to Plotinus. Professor Brett 1925-26.
    - 17—The Relation between the Metaphysics of St. Augustine and Plato. Professor Carr.
    - 18—Graeco-Roman Literary Criticism with special study of Longinus. Professor Dale
    - 19—The Greek Conception of the Function of Art in the State. Professor Milner.
    - 20—Greek Archaeology. Professor Kirkwood 1925-26
    - 21—Philip and Alexander of Macedon, with special study of Diodorus, Bk. XVI and Arrian: Anabasis Mr. Pemberton.
- [See also Greek and Roman History, 1, 2, 4, 9, 10].

## II. LATIN.

- \*1—Latin Prose Composition.
- \*2—Juvenal and Martial (selections).
- \*3—Virgil, Georgics I, IV, Aeneid.
- \*4—Horace.
  - 5—The Minor Poems of Virgil. Professor DeWitt 1925-26.
  - 6—Roman Literary Criticism with special reference to Cicero's rhetorical writings. Professor DeWitt 1925-26.
  - 7—Roman Stoicism, with special study of Cicero, De Finibus, Bks. III, IV. Professor Robertson 1925-26.
  - 8—Cicero, Academica, and the Eclectic Philosophy. Professor Robertson 1926-27.

- 9—Roman Archaeology. Professor Kirkwood 1926-27.  
 10—Latin Epigraphy. Professor DeWitt 1925-26.  
 11—Roman Religion. Professor DeWitt 1926-27.  
 12—Plautus and Terence, with a survey of Greek Comedy after Aristophanes. Professor Adams.

[See also Greek and Roman History, 5, 6, 11, and Greek 18].

### III. GREEK AND ROMAN HISTORY.

- \*1—Thucydides, Bks. I-III, VI, VII.  
 \*2—Herodotus, Bks. VII, VIII, IX.  
 \*3—Greek History, B.C. 454 to B.C. 399.  
 \*4—Aristotle, Politics, Bks. I, II, III.  
 \*5—Tacitus, Annals, Bks. I-VI, and the Principate.  
 \*6—Cicero, Letters (Watson); Sallust, Catiline; Caesar, Civil War.  
 \*7—Roman History (to death of Cicero).  
 \*8—Roman Institutions.  
     9—Herodotus. Professor Sissons 1925-26.  
     10—Aristotle, Politics. Professor Milner.  
     11—The Letters of Cicero. Professor Milner.  
     12—The Geography of the Mediterranean World.  
             Professor Cochrane 1925-26.  
 13—The Second Punic War with a special study of Livy's Third Decade. Professor Kirkwood 1925-26.  
 14—Interpretation of Greek and Roman History to 476 A.D.  
             Professor Milner.  
 15—Greek and Latin }  
     Historical Literature } Professor Cochrane 1925-26.  
 16—The Roman Occupation of Britain. Professor Smith 1925-26.

### IV. COMPARATIVE PHILOLOGY AND SANSKRIT.

- \*1—Comparative Philology.  
 2—Introduction to the study of Sanskrit. Professor DeWitt 1925-26.  
 3—Introduction to Oscan and Umbrian. Professor DeWitt 1926-27.  
 The following are the minor subjects offered in the Classics: \*  
 A—Greek Literature: Greek, 2, 4, 6.  
 B—Latin Literature: Latin, 2, 3, 4.  
 C—Greek History: Greek and Roman History, 1, 2, 3, 4.  
 D—Roman History: Greek and Roman History, 5, 6, 7, 8.  
 E—Greek Philosophy: Greek, 2, 3, 5, 7.  
 F—Comparative Philology and Sanskrit, 1, 2, 3.  
 G—Greek and Roman Archaeology: Greek, 20, Latin, 9, 10, 11.

\*For the courses constituting these minor subjects, equivalent courses may be substituted with the approval of the staff in Classics

## SEMITIC LANGUAGES

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

## DEGREE OF DOCTOR OF PHILOSOPHY

A candidate proceeding to the degree of Doctor of Philosophy in the department of Semitic Languages must give proof of his fitness for advanced study in this department either as being an honour graduate of the University of Toronto or as possessing an equivalent standing in some field of Semitic Philology in a recognized University or College.

A course of study must be elected by the candidate in consultation with the members of the department under whom it is proposed to pursue the major and minor subjects and must be submitted to and approved by the department.

The department will not recommend a student for the degree merely on the ground of faithful study for a definite period but only because of high attainment in such study manifested in the examinations and by the thesis.

The following divisions are offered as Majors:

Hebrew Language and Literature.

Aramaic Language and Literature.

Syriac Language and Literature.

Assyrian and Babylonian Language and Literature.

Arabic Language and Literature.

The following Minors are recommended for candidates taking a Major in this department:

Language cognate to the major subject.

Greek (Classical).

Philosophy.

Hellenistic Greek (Biblical and Patristic).

These Minors shall be chosen in accordance with the general regulations. These recommendations do not prohibit other Minors being arranged between the candidate and the department. When a minor subject is elected outside of the department, the candidate must obtain the consent of the department concerned to the choice of such Minor and he shall be subject to the regulations of that department in respect thereto. No student of this department shall be exempt from the written examination on more than one Minor.

## COURSES OF INSTRUCTION

*Aramaic:*

1. Introductory Palestinian Aramaic. Translations from Daniel, Ezra and Targums.
2. The development of the Aramaic dialects. Professor S. H. Hooke

*Arabic:*

1. Elementary course. Translations from simple texts.
3. Reading of representative selections from Arabic Literature.

Professor J. F. McLaughlin.

*Assyrian, Babylonian and Sumerian:*

1. Elementary Course Translations of Inscriptions.

Professor W. A. Irwin.

2. Assyrian and Babylonian Historical Inscriptions.

Professor T. J. Meek.

3. Assyrian and Babylonian Law Codes and Business Contracts.

Professor T. J. Meek.

4. Assyrian and Babylonian Religious Texts and Epics.

Professor T. J. Meek

5. Bilingual Texts and Sumerian Inscriptions.

Professor T. J. Meek.

*Hebrew:*

1. Prophetic Literature of the Old Testament.

2. Poetical Literature of the Old Testament.

3. Hebrew Wisdom Literature.

Professor J. F. McLaughlin.

4. Hebrew Prophecy and Apocalypse.

Professor J. F. McLaughlin.

5. Hexateuchal Criticism.

Professor W. R. Taylor.

6. Critical study of selections from Prophetic Literature.

Professor W. R. Taylor.

7. The Social Development of the Hebrews.

Professor W. R. Taylor.

*Syriac:*

1. Introductory Course. Translations from simple texts.

2. Syriac Patrology.

Professor S. H. Hooke.

3. Selections from Syriac Literature.

Professor W. R. Taylor.

*Semitic History and Archaeology:*

1. Semitic Epigraphy.

Professor S. H. Hooke.

2. Semitic Archaeology and Art.

3. History of the Hebrews.

4. History of the Near East.

5. History of Mohammedanism.

*Hellenistic Greek:*

1. The Literature of the Septuagint.

Professor W. R. Taylor.

2. Selections from Hellenistic Literature relative to the study of Religion.

Professor W. R. Taylor.

ENGLISH

DEGREE OF MASTER OF ARTS

Students admitted as candidates for this degree must have completed the courses required of honour students in the graduating department of English and History, or give evidence of possessing similar qualifications.

They are required to be in actual attendance, to cover satisfactorily the work of three of the courses outlined below, and to submit a dissertation on some subject connected with their work.

#### DEGREE OF DOCTOR OF PHILOSOPHY

Students admitted as candidates for this degree in English are required to be in actual attendance, to cover satisfactorily the work of at least ten of the courses outlined below (or their equivalents), and to submit a thesis: this thesis must, in the opinion of the department, be worthy of publication. They shall further be required to take one Minor from each of the groups (a) and (b) enumerated below.

The selection of Minors, of courses, and of subjects for the thesis must in every case be approved by the department.

#### COURSES OF INSTRUCTION

The annexed schedule is intended to indicate the general character and the extent of the work required, but equivalent courses may be substituted for those contained in the list. Courses 1 to 5 are identical with the undergraduate English courses 3c, 4c, 8d, 4e, and 4d, respectively, and are open only to students who have not taken these courses. Those courses which are available for the session 1925-26 are marked by an asterisk.

- \*1—Old English: Grammar and reading of Selections.  
Professor Clawson.
- \*2—Middle English and Historical Grammar. Professor Clawson.
- \*3—Milton and Seventeenth Century Literature.  
Professors Auger and Wallace.
- \*4—The Development of the Drama  
Professors Auger, Knox and Simpson.
- \*5—Nineteenth Century Thought.  
Professors Edgar, McCorkell, Simpson and Mrs. Kirkwood.
- \*6—Beowulf. Professor Clawson.
- 7—Chaucer and his School. Professor Clawson.
- \*8—Shakespeare. Professor Knox.
- 9—The Drama in the Seventeenth Century. Professor Knox.
- \*10—Early Seventeenth Century Prose. Professor Davis.
- \*11—Wordsworth. Professor Wallace.

12 and 13—The study of two authors approved by the Department other than those mentioned in this list.

14 and 15—The study of two selected periods of literature other than those mentioned in this list.

\*16—Recent English Fiction and Poetry. Professor Edgar.

\*17—Recent English Poetry. Dr. Pratt.

The following Minors are recommended for students taking their Major in this department:

Group (a)—Any one of the following courses:

1—Gothic as an Introduction to the Study of Philology.

2—The History of Literary Criticism. Professors Dale and Davis.

3—English Political Thought. Professor Kennedy.

Group (b)—Any of the Minors offered in Classics, French, German, Italian, Spanish, History, and Philosophy.

Minors in English for candidates who are not taking their Major in English will be arranged on application.

## GERMAN

The selection of courses and of theses for the degrees of Master of Arts and Doctor of Philosophy must in every case be approved by the department.

### DEGREE OF MASTER OF ARTS

Students admitted as candidates for the degree of Master of Arts in German must cover satisfactorily the work of at least three of the courses outlined below and must submit a thesis on some subject connected with the work.

### DEGREE OF DOCTOR OF PHILOSOPHY

Students admitted as candidates for the degree of Doctor of Philosophy in German must cover satisfactorily the work of at least ten courses and must submit a thesis which, in the opinion of the department, is worthy of publication. They shall further be required to select two Minors in approved departments other than German.

Candidates taking their Major in a department other than German may select as a Minor in German any three courses of fifty hours each.

## COURSES OF INSTRUCTION

- 1—The Middle High German Popular Epic: The Nibelungenlied.  
Professor Needler.
  - 2—History of the German Drama from the Beginning to Lessing.  
Professor Needler.
  - 3—Lessing.  
Professor Young.
  - 4—Goethe's Autobiographical Prose Writings.  
Professor Young.
  - 5—Goethe's Faust.  
Professor Lang.
  - 6—Schiller's Philosophical Writings.  
Professor Fairley.
  - 7—The German Drama in the Nineteenth Century.  
Professor Lang.
  - 8—Schopenhauer in Relation to German literature.  
Professor Fairley.
  - 9—A General Course in the German Literature of the Nineteenth Century, with the reading of approved texts.  
Professor Lang, Professor Young
  - 10—Middle High German Grammar and Literature.  
Professor Needler.
  - 11—The Austrian Drama in the Nineteenth Century.  
Professor Young.
  - 12—The Austrian Drama.  
Professor Lang.
  - 13—Goethe and his English Contemporaries.  
Professor Needler.
  - 14—Goethe's Political Opinions.  
Professor Needler.
  - 15—Goethe's *Singspiele* and his Relation to the Art of Music in General.  
Professor Needler.
  - 16—Swedish.  
Professor Hedman.
  - 17—Danish-Norwegian.  
Professor Hedman.
  - 18—The Dramas of Ibsen  
Professor Hedman.
  - 19—The Modern German Lyric  
Professor Hedman.
- Other courses will be arranged to meet the individual needs of candidates.

## ROMANCE LANGUAGES

## DEGREE OF MASTER OF ARTS

The general conditions of candidacy for the Master's degree will be found on pages 9 and 10. Proposed courses of study and the subject of the thesis (if offered) must receive the approval of the staff in French, or in Italian, or in Spanish, in one of which the candidate must do the major part of his work.

A knowledge of standard classic authors is presupposed.

## DEGREE OF DOCTOR OF PHILOSOPHY

A candidate for the degree of Doctor of Philosophy shall select his major and minor subjects under the direction of the staff in Romance Languages in accordance with the general regulations. The major subject shall be chosen from one of the following groups:

Romance Philology. Italian Language and Literature.  
 French Language and Literature. Spanish Language and Literature.

Both Minors may be selected within the department of Romance Languages. One Minor *must* be selected within the department. If the second minor is selected outside of this department it must be chosen from a department cognate with that of the major subject. In any case the candidate must do some work in each of the four groups named above.

The department will not recommend the conferring of this degree merely because of the completion of a certain programme of studies. Evidence must be exhibited of special aptitude and of high attainment in the field chosen by the candidate. The thesis must be a distinct contribution to the literature of the subject discussed.

A student whose major subject is not in Romance Languages, but who requires a Minor in one of its groups, will be expected to make his choice of such Minor only after consultation with the staff in Romance Languages.

## COURSES OF INSTRUCTION

In the case of courses marked (a) and (b) one alone is given, unless circumstances justify both.

1—Methods of research, bibliography. One hour a week.

Professor Buchanan.

2—Introduction to Romance philology. Two hours a week.

Professor Ford.

3—Linguistic studies in Vulgar Latin texts.

Dr. Anderson.

4—(a) Old French literature

(b) Literary doctrines in France since 1549. Professor de Beaumont.

5—(a) Old Provençal

(b) Dialectal studies based on the *Atlas linguistique de la France*.

Professor Ford.

6—(a) The Arthurian romances

(b) The Picard dialect

Professor Allen.

7—Linguistic and literary study of narratives of French travellers and explorers of the sixteenth and seventeenth centuries.

Professor Cameron.

8—(a) Le mouvement philosophique

(b) Traditional elements in contemporary French literature.

Professor Will.

9—(a) The history of prose fiction in France

(b) The novel of manners in the Romance countries and in England.

Professor Kittredge.



- 10—(a) French Romanticism, its origins and development  
 (b) Molière. Professor Moraud.
- 11—(a) The theory of love in the *dolce stil nuovo*. Professor Shaw.  
 (b) The Italian novel in the Nineteenth Century. Professor Shaw
- 12—(a) Italian phonology and morphology  
 (b) A subject from Italian literature of the Renaissance. Professor Goggio.
- 13—Calderón. Professor Buehanan.
- 14—All instructors and graduate students of the department meet once a month for the discussion of recent publications and of problems in research.

## HISTORY

### DEGREE OF MASTER OF ARTS

Candidates are accepted under the general regulations, but before being admitted must give evidence of adequate training for advanced study in history. Candidates may proceed to the degree either by the pursuit of an advanced course of study or by the preparation of a thesis, in accordance with Rule 20 on pp. 8, 9 above

Candidates for the degree by the pursuit of an advanced course of study are required to take the following subjects:

(1) Historical method, bibliography, and the development of English historical writing.

(2) Two of the following periods of history, to be studied in detail in the leading secondary authorities and selected primary sources. The choice of periods should be made after consultation with the teaching staff in History.

(a) The History of Canada from the Discovery to 1763; *or* from 1763 to Confederation; *or* from the Act of Union to the present day.

(b) The American Revolution and the framing of the Constitution.

(c) European History: The Renaissance and Reformation, *or* The French Revolution and Napoleon, *or* The Nineteenth Century.

(d) A period of Mediaeval History.

(e) British History. The Tudors, *or* The Seventeenth Century, *or* from 1688-1815, *or* The Nineteenth Century.

(f) A period of English Constitutional History.

(3) One of the following subjects:

(a) Modern Political Theory.

(b) Economic Theory.

(c) The Economic History of England.

(d) The Organization of Modern Democratic Government.

(e) The Political Institutions of the British Empire.

Candidates for the degree by the preparation of a thesis are required to take course (1) above, and one of the options in (3). They must present a thesis on an approved subject based on the sources and prepared under the direction of the staff in history. They will in addition be examined on their knowledge of the general historical background of the subject chosen. Candidates who offer a subject in Canadian History should be prepared to avail themselves of the facilities for research in the Dominion Archives at Ottawa.

#### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates are accepted under the general regulations. The choice of major and minor subjects should be made from the list given below, though other subjects may be arranged by consultation with the staff in History. All candidates are required to take a course in historical method, bibliography, and the development of English historical writing.

Candidates must present a thesis of such a character as to constitute an addition to the literature of the subject selected. Candidates who offer a subject in Canadian History should be prepared to avail themselves of the facilities for research in the Dominion Archives at Ottawa.

- (1) The History of Canada.
- (2) The American Revolution.
- (3) The French Revolution and Napoleon.
- (4) Nineteenth Century Europe.
- (5) A period of Mediaeval History.
- (6) The Renaissance.
- (7) English Constitutional History and Law
- (8) The History of the modern British Empire.

#### POLITICAL SCIENCE

##### DEGREE OF MASTER OF ARTS

Candidates for the degree of Master of Arts in the department of Political Science must present evidence of fitness for advanced study in the department, either by having taken special undergraduate courses in Political Science, Commerce and Finance, History, or Philosophy; or by giving such other proof of sufficient knowledge as will justify their acceptance as advanced students. Each candidate is required to submit, for the approval of the staff in Political Science, on or before the date prescribed in the general regulations in this connection, the title of the thesis proposed. The thesis must be submitted in complete form on or before the 1st May. An oral examination upon the subject of the thesis will be conducted by the staff of the department before the candidate is recommended to the Council of the School of Graduate Studies for the degree.

All candidates for the degree of Master of Arts are required to attend a special lecture course on a subject which is announced at the commencement of each session, and to undertake a course of reading in current questions *either* of Law and Politics *or* of Economics.

#### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates may proceed to the Degree of Doctor of Philosophy in the manner prescribed in the general regulations. They may select their major course from the following list:

Economic History.

Economic Theory.

Public Finance.

Philosophy of Politics.

Constitutional History and Law.

Special subjects cognate to any or all of the above general courses are to be regarded as included under them.

Special postgraduate courses, varying in topics according to the needs of the students, are customarily given by the staff in the department. Importance is attached to individual assistance in the investigation of specific problems. The thesis offered by the candidate must present either the results of an original investigation into some problem and thus form a contribution to knowledge or a critical examination of the results of investigation by others and thus form a contribution to scholarship. One Minor subject must be selected from the lists given above and the other from the subjects offered by the departments of History and Philosophy. In exceptional circumstances candidates may submit for the approval of the department some other subject of study as a second Minor, even though not obviously related to the Major.

An oral examination will be conducted by the staff of the department in the major and in the first minor subject before the candidate is recommended to the Council of the School of Graduate Studies for the degree.

#### PHILOSOPHY

##### DEGREE OF MASTER OF ARTS

Candidates for this degree will proceed under the general regulations, to be found on pages 7-9. Except in special cases, candidates will be expected to qualify by pursuing an approved course of study, and passing a satisfactory examination therein.

Candidates for this degree fall into two classes, viz., those who have, and those who have not taken the Honour work in Philosophy for their B.A. degree.

Those who have taken the B.A. degree with honours in Philosophy must select their subjects of study from Courses 8-21, given below. Four courses of study will be required for the degree. Not more than

two courses may be selected from any one division of the department. In cases where permission is granted by this department, one subject may be taken from another department or two subjects, provided that one is from the department of Psychology. Subject to the approval of this department a thesis may be substituted for one of the courses.

Those students who have not graduated with honours in Philosophy, will be required, before being admitted as candidates for the degree, to take such preliminary courses, or to furnish such other proof of sufficient knowledge as will justify their admission to graduate courses. They will select their subjects of study in consultation with the staff in Philosophy. The work may be expected to require two years in most cases.

Candidates who furnish evidence satisfactory to the staff of the department of their qualifications for original investigation may with the consent of the department qualify by writing an approved thesis, and taking special work in consultation with the staff in Philosophy (20, I. (b)).

The writer of a thesis will be required to report regularly to the head of the department, and also to the head of the division in which his thesis falls.

#### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for this degree must present a thesis embodying the results of independent investigation, of such a character as to make a distinct contribution to the literature of the subject and to show capacity for original research on the part of the writer. The writer of a thesis must report regularly to the head of the department, and also to the head of the division in which his thesis falls.

Students are recommended to complete the work for the degree of Master of Arts as part of the work for this degree. At least one additional subject will be required for the minor in Philosophy of candidates who have completed the work for the Master's degree.

For the second Minor students must fulfil the requirements of the department in which such Minor is taken. Both Minors must be selected after consultation with the staff in Philosophy.

*Divisions of the department:* History of Philosophy, Logic and Epistemology, Ethics.

#### COURSES OF INSTRUCTION

The following courses are offered to graduate students. In each of these courses fifty hours will be required, including lectures and seminar work. Standing in these courses will be determined by examinations, or other tests, as the staff may determine.

##### GENERAL.

- |   |                          |                  |
|---|--------------------------|------------------|
| 1—History of Philosophy.                          | Kant and modern systems. | Professor Hume.  |
| 2—History of Modern (chiefly British) Philosophy. |                          | Professor Hume.  |
| 3—History of Ancient Philosophy.                  |                          | Professor Brett. |

- 4—Logic, Deductive and Inductive. Theory of the Judgment.  
Professor Brett.
- 5—Ethics, Kant and Green. Professors Tracy and Lane
- 6—Modern Ethics Professors Tracy and Brown.
- 7—Social Ethics. Professors Robinson and Lane.

### HISTORY OF PHILOSOPHY.

- 8—Proofs of God's Existence in Modern Philosophy. Professor Hume.
- 9—Modern Philosophy, with special reference to the Hegelian Movement.  
Professor Hume.
- 10—(In alternate years with 9) Modern Philosophy, with emphasis on the Anti-Rationalist, Empiricist, and Pragmatist Writers.  
Professor Hume.
- 11—Modern Philosophic Problems (Individuality, Value, the Absolute Nature, Evil, Destiny).  
Professor Lane.
- 12—Ancient Philosophy from Thales to Plato. Professor Brett.
- 13—Ancient Philosophy from Plato to Augustine. Professor Brett.
- 14—The relation between the Metaphysics of St. Augustine and Plato.  
Professor Carr.

### LOGIC AND EPISTEMOLOGY.

- 15—Principles and Methods of Modern Thought—Special Subject: Realism.  
Professor Brett.
- 16—Recent discussions in the Theory of Knowledge and Being.  
Professor Brown.

### ETHICS.

- 17—Idealism in Ethical Theory. Professor Tracy.
- 18—The Philosophy of Bergson, with emphasis on its Ethical Aspects.  
Professor Lane
- 19—The Evolution of Morals. Professor Robinson
- 20—Social and Political Ethics. Professor Robinson
- 21—The Philosophy of Religion. Professor W. T. Brown
- The following Minors are offered in this department for candidates whose Majors lie in other departments:

- Philosophy A—Courses 1 and 2.
- Philosophy B—Courses 3 and 12 or 13.
- Philosophy C—Courses 4 and either 13 or 14.
- Philosophy E—Courses 6, and either 5 or 7.

## PSYCHOLOGY

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

Applicants must satisfy the staff as to their fitness for advanced work in this department. Students who have completed the Honour Course in Psychology may qualify for the degree in one year. Students who have not taken the Honour Course will be required to take one year of preliminary work and one year of advanced work, but exemption from the preliminary work may be granted to those students who (a) have taken Psychology during three years of their Undergraduate Course and obtained high standing, or (b) are considered by the staff to be specially qualified for advanced studies on account of work done at this or any other University.

Graduate Courses are offered in the subjects enumerated below. Candidates who take their major work in this department will be expected to qualify by writing a thesis on a subject approved by the staff and meeting such other requirements as the staff may specify.

## COURSES OF INSTRUCTION

1—Special experimental problems.	Professor Bott.
2—Systems of psychology critically considered.	Professor Bott.
3—Psychology of intelligence, character and temperament	Professor MacPhee.
4—Legal Psychology.	Professor MacPhee.
5—Genetic Psychology.	Professor Blatz.
6—Abnormal Psychology.	Professor Blatz.
7—Historical development of Psychology.	Professor Brett.
8—Psychology of Religion.	Professor Lane.

## DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for this degree must present a thesis containing the results of an original investigation and showing capacity for independent research.

The major subject and one minor may be selected from Psychology. The second minor may be selected from the minors offered by any other department in the University. The selection of the major and both minors must be made with the approval of the staff of this department. Minors in Psychology for candidates who are not taking their major in Psychology will be arranged on application.

## EDUCATIONAL THEORY

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations

Candidates may qualify for the degree by pursuing three approved courses of study. Of these three one must be selected from the M.A. courses specified below, one from the courses offered by another department of the University, and the third from the courses offered in this or any other department of the University. The selection of courses must be approved by the staff of this department.

Every candidate for the degree is required to present a thesis embodying the results of some special study or original investigation

The time required to complete the requirements for the degree will normally be two years

## DEGREE OF DOCTOR OF PHILOSOPHY

Courses leading to the degree of Doctor of Philosophy are offered to students qualified under the general regulations. Candidates may elect to take their major subjects in any of the sections A to D below. Of the minors one may be selected in the subjects offered below, one must, and both may, be chosen from minors offered in other departments of the University. The minors are also open to candidates whose major subject lies in another department.

The thesis submitted must be a distinct contribution to knowledge and show capacity for original research.

## COURSES OF INSTRUCTION

A. *Educational Administration:*

- \*1. Education Administration in Ontario. Dean Pakenham

B. *History of Education:*

2. History of Education in Great Britain during the nineteenth century. Professor Macpherson.

3. History of Education in Ontario during the nineteenth century. Professor Macpherson.

- \*4. The Foundations of Modern Public Education. Professor Macpherson.

C. *Educational Psychology:*

- \*5. The Psychology of Mathematics. Professor Sandiford.

- \*6. Studies of Men and Women of Genius. Professor Sandiford.

- \*7. The Theory of Educational Measurements. Professor Sandiford.

8. Intelligence: Its Nature and Measurement. Professor Sandiford.

9. Achievement Tests: Their Construction and Use.

Professor Sandiford

10. The Psychology of Individual Differences. Professor Sandiford.

*Note*—Courses indicated \* are M.A. courses and minors.

D. *The Science and Philosophy of Education:*

- |   |                   |
|---|-------------------|
| *11. Educational Sociology.                 | Professor Coombs. |
| 12. Philosophy of Education                 | Professor Coombs  |
| *13 Science of Education.                   | Professor Coombs. |
| *14 Scientific Study of Educational Method. | Professor Coombs. |
| *15. Social Ethics                          | Professor Coombs. |

*Note*—Courses indicated \* are M.A. courses and minors

# MATHEMATICS

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

## DEGREE OF DOCTOR OF PHILOSOPHY

A candidate proceeding to the degree of Doctor of Philosophy in this department may select his major subject from any of the branches of Mathematics after consultation with the staff.

The thesis submitted for the degree must give evidence of original investigation and must constitute a distinct addition to the knowledge of the subject.

## COURSES OF INSTRUCTION

- |   |                    |
|---|--------------------|
| 1—Differential Calculus. Fifty hours.   | Professor Fields.  |
| 2—Integral Calculus. Fifty hours.   | Professor Pounder. |
| 3—Differential Equations. Fifty hours.  | Professor Fields.  |
| 4—Theory of Functions. Fifty hours.   | Professor DeLury.  |
| 5—Advanced Theory of Functions of a Complex Variable                                    | One hundred        |
| hours.  | Professor DeLury.  |
| 6—Theory of Algebraic Functions and Abelian Integrals (Based on Riemann, Noether, etc.) | Fifty hours.       |
| 7—Theory of Algebraic Functions and Abelian Integrals (Methods of the lecturer).        | Fifty hours.       |
| 8—The Algebraic Theory of Algebraic Functions of one Variable.                          | Professor Fields.  |
| Twenty hours.   | Professor Beatty.  |
| 9—Theory of Elliptic Functions. Fifty hours.  | Professor Fields.  |
| 10—Calculus of Variations. Fifty hours.   | Professor Fields.  |
| 11—Determinants and Theory of Matrices. Fifty hours.                                    | Professor Fields.  |
| 12—Theory of Rational Numbers. Fifty hours.   | Professor Fields   |
| 13—Theory of Algebraic Numbers including the theory of the ideals.                      | Professor Fields.  |
| Fifty hours.  |                    |
| 14—Theory of Substitutions with applications to Algebraic Equations                     | Professor DeLury   |
| Twenty-five hours.  |                    |



15—Theta-Functions with arithmetical applications; elliptic functions with geometrical applications, linear differential equations of the second order; finite groups of automorphic substitutions; Schwarzian groups; modular group; modular functions, Picard's theorem. One hundred hours. Professor Chapelon.

16—Theory of Sets with applications to the theory of functions. Fifty hours. Professor Beatty.

17—Differential Geometry. Fifty hours. Professor Pounder.

18—Elliptic Functions. Fifty hours. Mr. Stevenson.

19—Differential Equations (Existence Theorems, etc.). Fifty hours. Professor Pounder.

20—Minimal Principles of Mechanics. Thirty hours. Professor Synge.

21—Foundations of Geometry. Fifty hours. Professor DeLury.

22—Actuarial Science: Frequency Curves and Correlation, Measurement of Groups and Series. Fifty hours. Professor Mackenzie.

Candidates taking a Major in Mathematics may select as one Minor any of the above courses except Nos. 1 and 2. The second Minor may be selected from any of the Minors offered by departments of the University other than Mathematics.

Courses Nos. 1 and 2 constitute a Minor in Mathematics (Mathematics A) for departments other than Mathematics, Physics, and Astronomy. The department is prepared to offer other Minors which must be arranged by consultation with the staff in Mathematics and the staff of the department in which the major subject lies.

Courses Nos. 1 to 4 are offered each year in the Undergraduate Courses in Honours.

In the session 1924-25, Course 1 was given by Professor Beatty, Course 3 by Professor Pounder, and Courses 7, 15, 16, 20 as announced.

The selection of courses to be given in the academic year 1925-1926 will be made at the opening of the session.

## PHYSICS

### DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for admission to the Degree of Doctor of Philosophy must have a competent knowledge of Mathematics and Chemistry.

Candidates may proceed to the Degree of Doctor of Philosophy in this Department in either of the following major divisions:—

Experimental Physics.

Mathematical Physics.

COURSES OF INSTRUCTION

- 1—The Electromagnetic Theory of Light and the Electron Theory of Matter. Fifty lectures. Professor McLennan.
- 2—On the Properties of molecules, atoms, electrons and atomic nuclei, together with a discussion of modern theories of magnetism. Fifty lectures. Professor McLennan.
- 3—On the Origin of Radiation, on the characteristics of series spectra and on the structure of atoms and atomic nuclei. Fifty lectures. Professor McLennan.
- 4—Classical Theories of Radiation and applications of the Quantum Theory to Thermal Radiation, Specific Heats and Photoelectricity. Fifty lectures. Professors McLennan and Satterly.
- 5—The Principle of Relativity with Applications. Fifty lectures. Professors McLennan and McTaggart.
- 6—Mathematical Theory of Electricity and Magnetism. Fifty lectures. Professor Burton.
- 7—Elasticity and Elastic Solid Theory of Light, Polarisation. Fifty lectures. Professor Burton.
- 8—Properties of Matter. Fifty lectures. Professor Satterly.
- 9—Advanced Heat and Thermodynamics. Fifty lectures. Professor Satterly.
- 10—Theory of Optics. Fifty lectures. Professor Gilchrist.
- 11—Wave Motion in Elastic Media. Fifty lectures. Professor Gilchrist.
- 12—The Physical Properties of Colloidal Solutions. Twenty-five lectures. Professor Burton.
- 13—Vector Analysis. Twenty-five lectures. Professor Burton.
- 14—Generalized Coordinates and their application to Physical Problems. Twenty-five lectures. Professor Burton.
- 15—Radioactivity. Twenty-five lectures. Professor Satterly.
- 16—Vapour Pressure, Osmotic Pressure and Related Phenomena. Twenty-five lectures. Professor Satterly.
- 17—Theory of Measurements. Twenty-five lectures. Professor Satterly.
- 18—Acoustics, Fourier's Series and its applications to Physics. Twenty-five lectures. Professor Gilchrist.
- 19—Geometrical Optics. Thirty-five lectures. Professor McTaggart.
- 20—Hydromechanics. Twenty-five lectures. Professor McTaggart.
- 21—Modern Optical Instruments, with an introduction to practical computing. Twenty-five hours. Professor McTaggart.

*Note*—Laboratory work in the majority of the above courses will be offered, but such work will not count for more than twenty per cent. of the whole course.

22—Physics Seminar. This organization consisting of all instructors, graduate students, and advanced students in the department meets fortnightly on Thursdays from 4.15 to 6 o'clock for the discussion of recent research.

Candidates for the Degree of Doctor of Philosophy taking their major subject in either Experimental or Mathematical Physics may select but one Minor from the department of Physics. This Minor may be either one of Courses 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or two of Courses 12, 13, 14, 15, 16, 17, 18, 19, 20, 21. The second minor may be selected from Mathematics, Astronomy, Chemistry A, B, C, D, E, or Mineralogy A, B, C, Geophysics, Physical Botany.

The following Minors are available in the Department:

Physics A—One of Courses 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.

Physics B—Two of Courses 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.

## ASTRONOMY

### DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

### DEGREE OF DOCTOR OF PHILOSOPHY

This department is not prepared at present to accept candidates for the degree of Doctor of Philosophy.

The following Minors are available for candidates taking their Major in other departments:

Astronomy A—The Application of Physical Methods to Astronomical Problems. Fifty lectures Professor Chant.

Astronomy B—Spherical Astronomy, including the use of the Nautical Almanac and exercises in computing. Forty lectures. Professor Chant.

Astronomy C—The Theory of Eclipses and Occultations, with practical work in the computation of Eclipses. Twenty-five lectures and twenty-five laboratory periods. Professor Young.

Astronomy D—Advanced work in the theory of selected lines of research in Astronomy, and the Application of Statistics to Stellar Problems. Fifty lectures. Professor Young.

## BIOLOGY

### DEGREE OF MASTER OF ARTS

Graduate work leading to the degree of Master of Arts is offered in the various subjects enumerated below under "Courses of Instruction". Except in special cases, candidates will be expected to qualify in accordance with Section 20, 1. (b) of the regulations.

## DEGREE OF DOCTOR OF PHILOSOPHY

Graduate work leading to the degree of Doctor of Philosophy is offered in the divisions indicated, subject to the following conditions:

1—Students electing major work must possess adequate qualifications for beginning work of a graduate character in the major subject, must be able to search the literature in the modern foreign languages, and must possess a competent though elementary knowledge of Physics and Chemistry. For the final examination a knowledge of the general field of Biology will be considered necessary. The thesis must include an original contribution to the knowledge of the subject.

2—Students electing major work must have their entire course of study approved by the instructor in charge of the major subject.

3—Students electing major work may not select more than one Minor out of the subjects separately listed as Minors for this Department.

4—Students electing minor work must have their selection approved by the instructor in charge of the subject.

5—The standing to be attained in a minor subject shall be understood to be in general equivalent to Honour standing in the four-hour course of a corresponding subject of the Fourth Year undergraduate course, except in special cases in which (a) exemption or part exemption from one Minor may be granted to students who already have competent knowledge of the subject, or (b) other requirements may be made depending on the previous training of the student

Major work is offered in the following subjects:

Vertebrate Zoology.	Histology.
Invertebrate Zoology.	Embryology.
Limnobiology.	Animal Genetics.
Marine Biology.	Comparative Neurology.
Entomology.	

## COURSES OF INSTRUCTION

1—†General Biology. A course of lectures and conferences on the general problems of Biology. The Staff in Biology.

2—\*Vertebrate Zoology: A laboratory course of 100 hours on the system, morphology and distribution of the Vertebrates.

Professor Bensley.

3—\*Invertebrate Zoology: A laboratory course of 100 hours on the system, morphology and distribution of the Invertebrates.

Professor Walker.

4—\*Limnobiology: A course on the system, morphology and oecology of fresh-water organisms, with special reference to fishery problems.

Professors Walker and Dymond.

5—‡Marine Biology: Special research on the oecology of marine organisms. Professor Huntsman.

6—†Entomology: A course on the morphology, classification and ecology of the Insects, with special research; in conjunction with Course 3.

Professor Walker.

7—†Animal Histology: A laboratory course of 100 hours on animal histology and cytology including histological technique.

Professor Piersol.

8—\*Microscopic Anatomy of Vertebrates: A laboratory course of 100 hours including histological technique.

Professor Piersol.

9—\*Vertebrate Embryology. A laboratory course of 100 hours on the general embryology of Vertebrates.

Professor Piersol.

10—\*Animal Genetics. A course on the principles and problems of Heredity, Variation and Breeding of Animals.

Professor MacArthur.

11—\*Comparative Neurology: A course on the composition of the nervous system in the mammalia and lower vertebrates.

Dr Craigie.

12—\*Experimental Embryology: A course on the history, methods and results of experimental embryology.

Professor Coventry.

*Note*—Courses indicated\* are offered as Minors, or in conjunction with advanced work, literature, problems and research in a special division of the field as Majors.

Courses indicated † are offered as Minors only.

Courses indicated ‡ are available as Majors only, and must be taken in conjunction with the subjects specified.

Except for the conditions mentioned above (Sections 1-4), no restrictions are imposed with reference to the selection of major and minor subjects. Students are advised, in making a preliminary choice of subjects, to keep in view the possible requirements of their future fields of work.

## BOTANY

### DEGREE OF MASTER OF ARTS

Graduate work leading to the degree of Master of Arts is offered in the various subjects enumerated below under "Courses of Instruction". Except in special cases, candidates will be expected to qualify in accordance with Section 20, 1. (b) of the regulations.

### DEGREE OF DOCTOR OF PHILOSOPHY

Graduate work leading to the degree of Doctor of Philosophy is offered subject to the following conditions

1—Students electing major work must possess adequate qualifications for beginning work of a graduate character in the major subject, and must possess a competent though elementary knowledge of Physics and Chemistry. For the final examination a knowledge of the general field of Biology will be considered necessary. The thesis must include an original contribution to the knowledge of the subject.

2—Students electing major work must have their entire course of study approved by the instructor in charge of the major subject.

3—Students electing major work may not select more than one Minor from the list enumerated below.

4—Students electing minor work must have their selection approved by the instructor in charge of the subject.

5—The standing to be attained in a minor subject shall be understood to be in general equivalent to Honour standing in the four-hour course of a corresponding subject of the Fourth Year undergraduate course, except in special cases in which (a) exemption or part exemption from one Minor may be granted to students who already have competent knowledge of the subject, or (b) other requirements may be made depending on the previous training of the student.

Major work is offered in the following subjects

Morphology of Cryptogams.

Morphology of Phanerogams.

Plant Anatomy.

Plant Oecology.

Plant Physiology.

Plant Pathology

#### COURSES OF INSTRUCTION

1—\*Cryptogamic Botany I. A lecture and laboratory course of 100 hours on the system and morphology of the Liverworts, Mosses, Ferns and fern allies.  
Professor Faull.

2—\*Cryptogamic Botany II: A lecture and laboratory course of 100 hours on the system and morphology of the Algae, Fungi, and Slime-moulds.  
Professor Faull.

3—\*Mycology: A special course on the system, morphology, and biology of the Fungi.  
Professor Faull.

4—\*Morphology of Phanerogams: A laboratory course of 100 hours on the morphology of Angiosperms, Gymnosperms and related fossil forms  
Professor Thomson

5—†Anatomy of Gymnosperms: A special course on the comparative anatomy of the Gymnosperms; in conjunction with Course 4.  
Professor Thomson.

6—\*Plant Physiology: A lecture and laboratory course of 100 hours on the physiology of plants.  
Dr. Duff.

7—\*Oecology and Plant Geography. A course of 100 hours on plant associations, the adaptations of plants to environmental factors, and geographical distribution  
Professor Sifton

8—\*Palaeobotany A special course on fossil plants Research in conjunction with course 5  
Professor Thomson.

9—\*An experiments<sup>1</sup> and seminar course on the principles of genetics.  
Professor Thomson.

10—\*Plant Pathology

Professor Faull.

11—\*Experimental Morphology. A lecture and laboratory course of fifty hours and research in conjunction with Courses 4 and 5.

Professor Thomson.

12—\*Poisonous Plants. 100 hour lecture and laboratory course

Professor Sifton.

*Note*—Courses indicated\* are offered as Minors, or in conjunction with advanced work, literature, problems and research in a special division of the field as Majors.

Courses indicated ‡ are available as Majors only, and must be taken in conjunction with the subjects specified.

Except for the conditions mentioned above (Sections 1-4), no restrictions are imposed with reference to the selection of major and minor subjects. Students are advised, in making a preliminary choice of subjects, to keep in view the possible requirements of their future fields of work.

## ZYMOLOGY

### DEGREE OF MASTER OF ARTS

Candidates for this degree will be required to show that they have reached the standard for the degree of B A , or its equivalent, in at least two of the following subjects: Biochemistry, Organic Chemistry, General Physiology or Plant Physiology. In addition to work done in prescribed courses candidates are required to present a thesis based on research work done in the Department

### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for this degree will be required to show that they have reached graduate standing in two or more of the subjects enumerated above. The thesis presented with the application must constitute a distinct contribution to the knowledge of the subject. Candidates are advised to choose Minors in accordance with the Regulations for the Degree from the following:

- Biochemistry 2 and 4.
- Pathology and Bacteriology 2.
- General Physiology 2 and 4.
- Organic Chemistry 1 and 2.
- Physics 11 and 16.

### COURSES OF INSTRUCTION

1. *Microbiology*: Course of lectures throughout the year on the theoretical aspects and practical applications of yeasts, molds and bacteria.
2. *Laboratory Course*: Conducted in conjunction with Course 1.

3. *Enzyme Chemistry*: Advanced lectures on the preparation and properties of enzymes and the theory of enzyme action

Candidates taking a Minor in Zymology are required to attend Courses 1 and 2.

## ANATOMY

### DEGREE OF MASTER OF ARTS

Any of the minor courses described below may be taken as leading to the degree of Master of Arts. Course 5 is also open to those who have covered the ground represented by the Minors.

### DEGREE OF DOCTOR OF PHILOSOPHY

The work required of candidates for the degree of Doctor of Philosophy with a Major in Anatomy will be principally the preparation of a thesis based upon an investigation of some anatomical problem, together with the reading of the literature cognate to the research.

As a preliminary requirement it will be necessary that the candidate shall have taken a course in General Biology and courses in Vertebrate Anatomy (Biology Course 2), Histology and Embryology. The last two may be taken as Minors.

Candidates taking a Major in this Department are recommended to select their Minors from the departments of Anatomy, Zoology, Physiology, Biochemistry, and Pathology.

### COURSES OF INSTRUCTION

The following courses of instruction are offered by the department:

- 1—Human Anatomy. Laboratory and lectures. Sixteen hours a week throughout the year. Professor McMurrich and Professor Watt
- 2—Human Microscopic Anatomy. A laboratory course of 100 hours including histological technique. Professor Piersol.
- 3—Anatomy of the Nervous System. Lectures and Demonstrations. Sixty-four hours. Professor Linell.
- 4—Vertebrate Embryology. A laboratory course of 100 hours. Professor Piersol.
- 5—Advanced Human Anatomy. Laboratory and reading. Professors McMurrich, Piersol, Watt and Linell.

Courses 1-4 are offered as minors. Course 5 is open only to those who have taken Courses 1-4. While the advanced work and research will be mainly in one special field (Gross Anatomy, Neurology, Embryology, Histology) the subject selected will be followed into the associated fields, one of which may be selected as a Minor.



## BIOCHEMISTRY

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations. All candidates who have not previously taken the course of lectures and laboratory work in advanced Biochemistry (Biochemistry 2 and 4) or its equivalent, will be required to take this course.

## DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy are required to submit a thesis which constitutes a distinct addition to the knowledge of the subject, and of such value as to merit publication in one of the leading scientific journals.

Candidates for the degree of Doctor of Philosophy in this department who do not intend taking Physiology as a minor are reminded that the relationship between these two Sciences is so intimate as to render a knowledge of the elements of mammalian physiology extremely advisable. Candidates are furthermore reminded that mathematics is becoming of very great importance in the investigation of the chemical phenomena of life, and they are strongly urged to acquire a knowledge of elementary differential and integral calculus and of statistical methods.

Students taking their major in Biochemistry may select their minors from any other division of graduate study offered by the University. The following subjects of study are, however, suggested as appropriate adjuncts to the study of Biochemistry.

Anatomy.  
Bacteriology.  
Biology.  
Botany.  
Chemistry.  
Histology.  
Household Science.  
Mathematics.  
Pathological Chemistry.  
Pathology.  
Pharmacology.  
Physics.  
Physiology.  
Psychology.  
Zymology.

Candidates for the degree of Doctor of Philosophy who desire to take a minor in Biochemistry will be required to pass an examination covering the field comprised in Courses 1, 2, 3 and 4.

## COURSES OF INSTRUCTION

- 1—General Biochemistry. Ninety Lectures.
- 2—Advanced Biochemistry. Sixty lectures.
- 3—A Laboratory Course in General Biochemistry. One hundred and twenty hours.
- 4—A Laboratory Course in Advanced Biochemistry.
- 5—Research in Biochemistry.

## PHYSIOLOGY

## DEGREE OF MASTER OF ARTS

Candidates for the degree are accepted under the general regulations. All candidates will be required to show credits for all the courses of this department or their equivalent. Courses 1, 2, 4 and 5 must be completed before entering upon the work for the M.A. degree. The other Courses may be taken simultaneously.

## COURSES OF INSTRUCTION

The following courses of instruction each extending throughout the session are offered:

1. Systematic lectures; two a week during second and third years.
  - (a) General and neuro-muscular physiology.
  - (b) Physiology of circulation, respiration, digestion and secretion.
  - (c) Metabolism, the functions of the ductless glands and reproduction.
  - (d) Physiology of the central nervous system and special senses.
2. Lectures in General Physiology.
3. Advanced lectures; two a week (third year—optional).
4. General Laboratory courses (total 180 hours).
5. Laboratory course in General Physiology.
6. Advanced Laboratory courses (optional).
7. Research in Physiology.
8. Journal Club; one hour a week.
9. Optional course Laboratory work in selected parts of subject (available to students of the third and subsequent years in the Medical faculty).
10. History of Physiology. A course of lectures supplemented by discussions towards which the students contribute.

## DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy are required to submit a thesis which constitutes a distinct addition to the knowledge of the subject, and of such value as to merit publication in one of the leading scientific journals.

Candidates for the degree of Doctor of Philosophy in this department who do not intend taking Biochemistry as a minor, or have not already taken the undergraduate courses in this subject are reminded that these two sciences are so intimate as to render a knowledge of general Biochemistry extremely advisable. They should at least take courses 1 (General Biochemistry) and 3 (a laboratory course in General Biochemistry) of the Department of Biochemistry. A general course in experimental Pharmacology is also almost essential. Certain courses in Biology, which should include vertebrate histology and cytology (7) comparative neurology (16) are of importance. A good training in Physics such as that mapped out for the honour degree in Physiology and Biochemistry is required. Similar courses in Mathematics are also required save in exceptional circumstances. Certain other courses in Physics are recommended. Students taking their major in Physiology may select their minors from any other division of graduate study offered by the University. The following subjects are suggested as appropriate, their relative importance as adjunct to the study of Physiology being indicated in a general way by the order in which they stand:

Biochemistry (1 and 3).  
Biochemistry (4).  
Pharmacology.  
Histology and Cytology (7 or 8 Biol.).  
Neurology (11 Biol. and 3 Anat.)

and one or more of the following:

Embryology (9 Biol.).  
General Biology (1 Biol.)  
Mathematics.  
Pathological Chemistry.  
Physics 7, 19, 21.  
Psychology.

When Physiology is taken as a minor, courses 1 and 4 are required as detailed above

## FOOD CHEMISTRY

### DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

### COURSES OF INSTRUCTION

- 1—The Chemical Nature of the Constituents of Foods. Lectures and laboratory work.
- 2—Fundamental Studies of Nutrition. Lectures and laboratory work.

## PATHOLOGY AND BACTERIOLOGY

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

## DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy are required to submit a thesis which constitutes a distinct addition to the knowledge of the subject, and of such value as to merit publication in one of the leading scientific journals

Candidates in this department may proceed to the degree in either of the following major division:

Experimental Pathology.

Bacteriology, including Immunology.

As these two departments are closely inter-related candidates are reminded that either major division may necessarily include considerable work in the other and that consequently neither can be accepted as a minor.

Candidates taking Experimental Pathology are reminded that a prerequisite for the study of experimental pathology is a knowledge of Physiology and those who do not propose taking Physiology as a minor must show credits of undergraduate work of honour standing.

Candidates taking Bacteriology and Immunology must similarly take Biochemistry or Pathological Chemistry as a minor or show credits of honour undergraduate standing in these subjects.

The following subjects are suggested as minors:

Physiology 1 and 4.

Biochemistry 1 and 4.

Pathological Chemistry 1, 3 and 4.

Chemistry 4 and 5.

Biology 1 and 8

Physics 9 and 18.

Botany 2 or 3.

The following courses are offered as minors:

Bacteriology.

1—A laboratory course of one hundred and twenty hours in the principles and technique of Bacteriology and Immunology and the application of this subject to Medicine supplemented by a course of lectures (30 hours).

2—A laboratory course of sixty-five hours in Immunology.

General Pathology.

1—A course of lectures upon the principles of Pathology (50 hours), along with a laboratory of one hundred hours, illustrating the important phases of the subject

## PATHOLOGICAL CHEMISTRY

## DEGREE OF DOCTOR OF PHILOSOPHY

Candidates proceeding to the degree of Doctor of Philosophy in this department must cover the field of Pathological Chemistry in addition to the investigation of some selected problem.

Students taking their Major in this department are recommended to select their Minors from the following.

Chemistry, A or C.  
Biochemistry.  
Physiology.  
Pathology.

## COURSES OF INSTRUCTION

- 1—General Pathological Chemistry   Thirty lectures.
- 2—Special Pathological Chemistry.
- 3—Elementary Laboratory Course   Sixty hours.
- 4—Advanced Laboratory Course.   Sixty hours.

The following Minor is offered by the department:

Pathological Chemistry A—Courses 1 and 3.

## CHEMISTRY

## DEGREE OF MASTER OF ARTS

A student who is proceeding to the degree of Master of Arts in accordance with the general regulations must consult the staff as to the selection of suitable courses of study.

## DEGREE OF DOCTOR OF PHILOSOPHY

The thesis submitted for the degree of Doctor of Philosophy in this department must constitute a distinct contribution to the knowledge of the subject.

The following major divisions leading to the degree are offered:

Organic Chemistry.  
Physical Chemistry.

Candidates taking a Major in either of these divisions may not select as Minors Chemistry A, C, or E. The following Minors are recommended.

*Major subject*—Organic Chemistry.

*Minors*—Chemistry D.

and

Bio-chemistry A, Pathological Chemistry A, or Botany 6.

*Major subject*—Physical Chemistry.

*Minors*—Chemistry B, Mathematics A, Physics A or Physics B.

# COURSES OF INSTRUCTION

The following courses of instruction are open to graduate students. The selection of any of these courses presupposes an adequate knowledge of elementary Chemistry.

1—Systematic Organic Chemistry. Fifty lectures (Open only to students who have already attended a preliminary course). Professor Allan.

2—Practical Organic Chemistry. Seventy-five hours.

3—Advanced Organic Chemistry: Heterocyclic Compounds, Synthetic Methods, Stereochemistry. Fifty lectures. Professor Allan.

4—Physical Chemistry. Fifty lectures (Open only to students who have already taken a preliminary course and have had instruction in the calculus.) Professor Kenrick.

5—Practical Physical Chemistry. Seventy-five hours.

6—Advanced Physical Chemistry: The Phase Rule and Chemical Thermodynamics. Seventy-five lectures. Professor Miller.

7—Inorganic Chemistry: A course of reading on topics selected with reference to the major subject. The candidate must give evidence of proficiency in chemical analysis.

8—Chemical Theory. Sixty hours

9—Mathematical Chemistry. Sixty hours.

The following Minors are offered by this department:

Chemistry A—Courses 1 and 2.

" B—Course 3.

" C—Courses 4 and 5.

" D—Course 6.

" E—Course 7

## GEOLOGY AND PALÆONTOLOGY

### DEGREE OF MASTER OF ARTS

Candidates for the degree of Master of Arts are accepted in this department under the general regulations.

### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy are required to submit a thesis which constitutes a distinct addition to the knowledge of the subject. In addition to the necessary preparation in Geology, a candidate must possess an adequate knowledge of the cognate sciences—Biology, Chemistry, Physics, and Mineralogy.

The following divisions constitute Majors in this department.

Geology.

Stratigraphical Geology and Palæontology.

Economic Geology.

## COURSES OF INSTRUCTION

The courses of instruction open to graduate students are given below. None of these courses, as part of either a Major or a Minor, may be taken by a candidate without a preparatory knowledge of the subject.

- 1—Dynamical and Structural Geology. Fifty lectures.  
Professor MacLean.
- 2—Invertebrate Palæontology. Fifty lectures on Morphology and Classification.  
Professor Parks.
- 3—Practical Invertebrate Palæontology. Seventy-five hours.  
Professor Parks.
- 4—Precambrian Geology. Twenty-five lectures.  
Professor Moore.
- 5—Glacial Geology and Physiography. Twenty-five lectures.  
Professor MacLean.
- 6—Economic Geology. Fifty lectures.  
Professor Moore.
- 7—Stratigraphical Geology. Seventy-five hours lectures and laboratory.  
Professor Parks.
- 8—Mining Geology. Twenty-five lectures.  
Professor Moore.
- 9—Practical Economic Geology. Fifty hours.  
Professor Moore.
- 10—Metamorphism. Twenty-five lectures.  
Professor Moore.
- 11—Geological Climatology. Twenty-five lectures.  
Professor MacLean.
- 12—Advanced Stratigraphy and Palæontology. One afternoon a week covering the geological column in three years. Session of 1925-26, the Mesozoic.  
Professor Parks.
- 13—Palæontology. Twenty-five lectures on special topics selected from year to year. Session of 1925-26, the Biyoza.  
Professor Parks.
- 14—Principles of origin and occurrence of economic mineral deposits.  
Professor Moore.
- 15—Geological Seminar. One hour per week.
- 16—Field work. (a) Pleistocene Geology, two weeks; (b) Precambrian Geology, two weeks, (c) Palæozoic Geology, two weeks.

Candidates pursuing a Major in any of the divisions of the department may select one but not two Minors from the departments of Geology and Mineralogy combined. The following Minors are recommended for candidates taking a Major in this department:

## MAJOR.

- Geology.
- Stratigraphical Geology and  
Palæontology.
- Economic Geology.

## MINORS RECOMMENDED

- Mineralogy A, B, or C, and  
Chemistry E or Biology 3.
- Geology A or C, or Mineralogy A  
and Chemistry E, or Biology 1, 3,  
or 11.
- Geology A or B or Mineralogy A  
or C. and Chemistry C, or  
Physics A or B.

The following Minors are offered by the department:

Geology A—Courses 1, 4, and 5

Geology B—Courses 2, 3, and 7.

Geology C—Courses 6, 8, and 9.

## MINERALOGY

### DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

### DEGREE OF DOCTOR OF PHILOSOPHY

In addition to the necessary preparation in Mineralogy proper, a candidate for admission to Mineralogy as a Major must possess an adequate knowledge of the cognate sciences—Chemistry, Physics, and Geology.

The thesis submitted for the degree must indicate that the candidate has made a distinct contribution to the knowledge of his subject.

### COURSES OF INSTRUCTION

1—Systematic Mineralogy. A course of twenty-five hours lectures and twenty-five hours laboratory. Professor Parsons.

2—Morphological Crystallography. A course of twenty-five lectures. Professor Walker.

3—Blowpipe Analysis and Determinative Mineralogy. Seventy-five hours laboratory. Professor Thomson

4—Determinative Mineralogy. Fifty hours laboratory in continuation of No. 3. Professor Thomson

5—Practical Crystallography. Seventy-five hours crystal measurement, drawing, projection, etc. Professor Parsons.

6—Physical Mineralogy. A course of twenty-five lectures and twenty-five hours laboratory. Professor Walker and Assistants.

7—Petrography. Twenty-five hours lectures and laboratory. Professor Walker.

8—Advanced Petrography. Twenty-five lectures. Professor Walker.

9—Petrography. Fifty hours laboratory. Professor Walker.

10—History of Mineralogy. Twenty-five lectures. Professor Walker

11—Optical Mineralogy. One hundred hours. Professor Walker.

12—Mineralography. Fifty hours. Professor Thomson



The Minors offered by this department are not available for candidates taking Mineralogy as a Major. For such candidates the following Minors are recommended:

Geology A, or Geology B, or Geology C.  
and  
Chemistry C, or Chemistry E.

The following groups of courses constitute Minors in this department:

Mineralogy A—Courses 1, 2, 3, 4 and 6.

Mineralogy B—Courses 1, 2, 5, 6, 9 and 12

Mineralogy C—Courses 1, 2, 6, 7, 8, 9 and 12.

It is assumed that the candidate possesses a general acquaintance with the subject before entering on his studies as outlined above.

## HYGIENE AND PREVENTIVE MEDICINE

### DEGREE OF MASTER OF ARTS

A student who is proceeding to the degree of Master of Arts in accordance with the general regulations must consult the Head of the Department in reference to the selection of suitable courses of study.

### DEGREE OF DOCTOR OF PHILOSOPHY

Candidates for the degree of Doctor of Philosophy in this Department are required to submit a thesis, which constitutes a distinct contribution to the knowledge of the subject. The work required will be that necessary for the preparation of the thesis and a study of literature cognate to the subject under investigation.

The following Major Divisions leading to the degree are offered:

Hygiene.  
Preventive Medicine

Candidates taking their Major in this department are recommended to select their minors from the Departments of:

Physiology  
Biochemistry  
Biology.  
Chemistry.  
Zymology.  
Physics.

### COURSES OF INSTRUCTION

1. *Hygiene and Preventive Medicine*—42 lectures and demonstrations.
2. *Advanced Public Health Bacteriology and Immunology*—Laboratory course of about 250 hours.
3. *Sanitary Chemistry*—Laboratory course of about 72 hours.
4. *Vital Statistics*—Elementary laboratory course.

## HOUSEHOLD SCIENCE

## DEGREE OF MASTER OF ARTS

Candidates for this degree are accepted under the general regulations.

## COURSES OF INSTRUCTION

1. *Economics of the Household*—Lectures and discussions two hours a week.
2. *An Advanced Course in Economics of the Household*—Reading and discussions.
3. *Dietetics*—Lectures and laboratory work.
4. *Dietotherapy*—Lectures, laboratory work and discussions.
5. *Household Science Seminar*—One hour a week.



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FACULTY OF DENTISTRY

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## STAFF

*The School of Dentistry of the Royal College of Dental Surgeons of Ontario became the Faculty of Dentistry of the University of Toronto, July 1st, 1925. The publication of this Calendar could not be delayed until the members of the Faculty of Dentistry were appointed, and accordingly the Faculty of the School of Dentistry of the Royal College of Dental Surgeons for the Session 1924-25 is published below*

### ADMINISTRATIVE OFFICERS

WALLACE SECCOMBE, D.D.S., F.A.C.D., Dean.

W. E. WILLMOTT, D.D.S., Secretary.

### FACULTY EXECUTIVE

G. R. ANDERSON, B.A.Sc., M.A., THOS. COWLING, M.A., D.D.S.,  
W. E. CUMMER, D.D.S., F.A.C.D., J. S. GRAHAM, M.B., M.R.C.S., R. G.  
McLAUGHLIN, D.D.S., A. D. A. MASON, D.D.S., E. W. PAUL, D.D.S.,  
WALLACE SECCOMBE, D.D.S., F.A.C.D., A. E. WEBSTER, D.D.S., M.D.,  
F.A.C.D., Honorary Dean., W. E. WILLMOTT, D.D.S.

### PROFESSORS

G. R. ANDERSON, B.A.Sc., M.A., Professor of Dental Physics.  
HAROLD KEITH BOX, D.D.S., Ph.D., Professor of Periodontology.  
F. A. CLARKSON, M.B., Professor of Physiology: Professor of Medicine.  
F. J. CONBOY, D.D.S., Professor of History of Dentistry, Applied  
Psychology and Economics  
J. W. CORAM, D.D.S., Professor of Dental Ceramics.  
THOMAS COWLING, M.A., D.D.S., Professor of Applied Chemistry and  
Metallurgy.  
W. E. CUMMER, D.D.S., F.A.C.D., Professor of Prosthetic Dentistry and  
Principles of Dental Technics.  
B. O. FIFE, D.D.S., Professor of Clinical Operative Dentistry.  
JOSEPH S. GRAHAM, M.B., M.R.C.S., Professor of Dental Histology and  
Pathology  
G. G. HUME, D.D.S., Professor of Orthodontia.  
ANDREW HUNTER, M.A., B.Sc., M.B., F.R.S.C., Professor of Bio-Chemistry.  
A. D. A. MASON, D.D.S., Professor of Clinical Dentistry.  
R. G. McLAUGHLIN, D.D.S., Professor of Dental Jurisprudence and Ethics.  
E. W. PAUL, D.D.S., Professor of Dental Surgery and Anaesthesia.  
F. E. RISDON, D.D.S., M.B., Professor of Surgery.  
WALLACE SECCOMBE, D.D.S., F.A.C.D., Professor of Preventive Dentistry.  
JAMES C. WATT, M.A., M.D., Professor of Osteology and Anatomy.  
A. E. WEBSTER, D.D.S., M.D., F.A.C.D., Professor of Operative Dentistry  
and Therapeutics.  
W. EARL WILLMOTT, D.D.S., Professor of Materia Medica and Pharma-  
cology: Associate Professor, Prosthetic Dentistry.

# ASSOCIATE PROFESSORS

- I. H. ANTE, D.D.S., Associate Professor, Prosthetic Dentistry and Crown and Bridge.  
 J. A. BOTHWELL, D.D.S., Associate Professor of Clinical Dentistry.  
 G. H. CORAM, D.D.S., Associate Professor of Clinical Dentistry.  
 E. A. GRANT, D.D.S., Associate Professor of Prosthetic Dentistry.  
 H. A. IOSKIN, D.D.S., Associate Professor, Patients' Consultation.  
 J. W. INGRAM, D.D.S., Associate Professor of Operative Dentistry.  
 NORMAN T. MACLAURIN, M.B., Associate Professor of Bacteriology  
 W. G. SWITZER, D.D.S., Associate Professor of Prosthetic Dentistry and Crown and Bridge.

# LECTURERS

- OSKAR KLOTZ, M.D., Lecturer, Tumors of the mouth. Professor of Pathology, University of Toronto.  
 HERBERT S. MCKELLAR, B.A., Lecturer in French Assistant Professor in French, University of Toronto.  
 ERWIN J. PRATT, M.A., B.D., Ph.D., Lecturer in English. Lecturer in English, Victoria College.

# INSTRUCTORS IN DENTISTRY

- F. L. COLE, D.D.S., Prosthetic Dentistry.  
 G. H. CORAM, D.D.S., Periodontia.  
 C. A. CORRIGAN, D.D.S., Orthodontia.  
 M. A. COX, M.B., Chemistry.  
 J. H. DUFF, D.D.S., Prosthetic Dentistry.  
 B. R. GARDINER, D.D.S., Anaesthesia and Exodontia.  
 W. T. HOLMES, D.D.S., Operative Dentistry.  
 W. L. HUGILL, D.D.S., Operative Dentistry.  
 F. S. JARMAN, D.D.S., Anaesthesia and Exodontia.  
 C. A. KENNEDY, D.D.S., Orthodontia.  
 L. F. KRUGER, D.D.S., Operative Dentistry.  
 G. V. MORTON, D.D.S., Anaesthesia and Exodontia  
 S. M. RICHARDSON, D.D.S., Operative Dentistry  
 H. G. ROBB, D.D.S., Anaesthesia and Exodontia  
 J. M. SHELDON, D.D.S., Operative Dentistry  
 W. G. TRELFOED, D.D.S., Periodontia.

# DEMONSTRATORS

- J. W. BEATTY, R.C.A., Drawing.  
 G. D. BEIERL, D.D.S., Operative Dentistry.  
 ABRAHAM BRODEY, M.A., M.B., Physiology.  
 S. S. CROUCH, D.D.S., Operative Dentistry.

MISS MERLE FOSTER, A.O.C.A., Modelling.  
 R. J. GODFREY, D.D.S., Prosthetic Dentistry.  
 H. H. HALLORAN, D.D.S., Prosthetic Dentistry.  
 W. H. HOLMES, M.B., Osteology and Anatomy.  
 C. S. MACDOUGALL, M.B., Osteology and Anatomy.  
 A. E. MONTGOMERY, M.B., Osteology and Anatomy.  
 MISS WINNIFRED C. RIDDLE, B.A., Histology, Bacteriology, Pathology.  
 E. M. RIGSBY, Shop Technic.  
 H. A. ROSS, D.D.S., Operative Dentistry.  
 W. E. L. SPARKS, M.B., Osteology and Anatomy.  
 R. R. WALKER, D.D.S., Prosthetic Dentistry.  
 R. S. WOOLLATT, D.D.S., Prosthetic Dentistry.  
 W. J. T. WRIGHT, B.A.Sc., Dental Physics.

## LIBRARIAN AND CURATOR OF MUSEUM

C. A. KENNEDY, D.D.S.

## HONORARY CLINICIANS

I. H. ANTE, D.D.S.  
 W. B. AMY, D.D.S.  
 W. L. CHALMERS, D.D.S.  
 HAROLD CLARK, D.D.S.  
 CHAS. E. PEARSON, D.D.S.  
 J. N. STEWART, D.D.S.  
 W. C. SMITH, D.D.S.  
 C. E. SUTTON, D.D.S.  
 A. S. THOMSON, D.D.S.

## TRAINING SCHOOL FOR DENTAL NURSES

W. E. CUMMER, D.D.S., F.A.C.D., Prosthetic Assistance.  
 B. R. GARDINER, D.D.S., Anaesthesia and Exodontia.  
 E. A. GRANT, D.D.S., Prosthetic Assistance.  
 JOS. S. GRAHAM, M.B., M.R.C.S., Sterilization and Pathological Technic.  
 W. T. HOLMES, D.D.S., Radiography.  
 H. G. LUCAS, Typewriting and Business Course.  
 R. G. McLAUGHLIN, D.D.S., Ethics and Conduct.  
 WALLACE SECCOMBE, D.D.S., F.A.C.D., Oral Hygiene, Dental Economics.  
 A. E. WEBSTER, D.D.S., M.D., F.A.C.D., Operative Assistance.  
 W. E. WILLMOTT, D.D.S., Materia Medica.

## *Supervisor of Dental Nurses in Training*

MISS GERTRUDE WHITEHEAD, D.N.

## HISTORICAL

In 1868 the legislature of the Province of Ontario passed an Act incorporating the members of the Dental profession in the Province as the Royal College of Dental Surgeons of Ontario with the dual function of teaching and licensing. The affairs of the profession are under this Act, administered as a public trust through a Board of Directors elected bi-annually by licentiates residing within the Province, every licentiate by virtue of his title being a member of the College. The Minister of Education is ex-officio a member of the Board of Directors.

A School of Dentistry was established by the College in 1875, and affiliated with the University of Toronto in 1888, which established the degree of Doctor of Dental Surgery and adopted the curriculum of the School of Dentistry as the qualification for this degree. The University and the College conducted joint annual examinations, and on the completion of the course the University conferred the degree of Doctor of Dental Surgery, and the College the title of Licentiate of Dental Surgery. This latter certificate is the only legal qualification for the practice of Dentistry in the Province of Ontario.

On July 1st, 1925, the School of Dentistry became the Faculty of Dentistry of the University, the Royal College of Dental Surgeons relinquishing to the University its function as a teaching body and retaining its function as a licensing body for the Province of Ontario.

A synopsis of the development of dental education in the province will be found on pages 59 to 61.

## BUILDING AND EQUIPMENT

The present building, situated at 240 College Street, near the University and Hospitals, was designed and erected in 1910 especially for the use of the School of Dentistry, and since then has had several additions.

The equipment, fittings and scientific apparatus are of the most modern type. A special feature is the thoroughly equipped Prosthetic and Operative Dentistry laboratories for each of the classes. There are also modern laboratories for teaching Chemistry, Metallurgy, Histology, Bacteriology, Pathology, Applied Dental Physics, Modelling, Drawing, Pharmacology, Physiology and Practical Anatomy.

The Infirmary is an extensive room, covering 7,200 square feet and lighted from the east, west, north and south. The infirmary is furnished with pedal chairs, cabinets and fountain cuspidors. Taken as a whole, the facilities provided by the Faculty of Dentistry for teaching modern Dentistry, with its large staff of Professors, Lecturers and Instructors, are not excelled anywhere.



## DEGREE OF DOCTOR OF DENTAL SURGERY

The course for the degree of Doctor of Dental Surgery extends over a period of five academic years and is a combined course, including a pre-dental year.

## FIRST YEAR (PRE-DENTAL) STANDING

Students having successfully completed one year in the Faculty of Arts of a Provincial University, including the subjects of English, French, Physics, Chemistry and Biology, with laboratory courses, or one year in the Faculty of Medicine, are given credit for First Year (Pre-Dental) and may be admitted without condition to the Second Year.

The First Year of the five-year dental course embraces the Principles of Dental Technics, including a laboratory course enabling the student to develop digital skill and make practical applications of the principles of technics to dental procedures, and all students are strongly advised to enroll for the entire five year course. However, as a convenience to candidates residing outside the Province of Ontario, they may be permitted to complete the First Year (Pre-Dental) as above, and register in the Second Year of the five-year course.

## ENTRANCE REQUIREMENTS

A candidate for admission to the First Year in the Faculty of Dentistry must produce satisfactory certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he proposes to register.

He must also present certificates giving him *full* credit in the following subjects of Pass Matriculation:

LATIN (Authors and Composition)

ENGLISH (Literature and Composition)

HISTORY (British and Ancient)

MATHEMATICS (Algebra and Geometry)

EXPERIMENTAL SCIENCE (Physics and Chemistry)

Any one of.

GREEK (Authors and Composition)

FRENCH (Authors and Composition)

GERMAN (Authors and Composition)

SPANISH (Authors and Composition) *or*

ITALIAN (Authors and Composition)

A candidate may also qualify for admission to the First Year by presenting one of the following.

(a) A certificate of matriculation, including Latin, in the Faculty of Arts of an approved British or Canadian University.

(b) A certificate accepted by the General Medical Council of Great Britain for registration as a student of Medicine or Dentistry.

(c) A degree in Arts (not being an honorary degree) from a recognized University.

A candidate is required to complete the above matriculation requirements before being admitted to the Faculty of Dentistry.

A certificate of standing as an unconditioned student of the Arts Department of a University in the United States may be accepted, but it must be on the basis of a complete four years' course in a High School accredited by the said University.

h. Certificates other than those previously mentioned will be considered in determining the status of applicants as undergraduates.

All candidates for entrance to the Faculty of Dentistry of the University of Toronto are required to sign the following application form.

To the Faculty of Dentistry, University of Toronto, and the Royal College of Dental Surgeons of Ontario.

Gentlemen:

I am desirous of entering upon the Study of Dentistry, under the provisions of the law respecting Dentistry in Ontario.

Should I be admitted as a Student of Dentistry, it is with the distinct understanding.

(a) That I will comply with the requirements of the Faculty of Dentistry respecting Matriculation, Pupilage and Payment of Fees

(b) That it is my present intention to complete the full course of study in the Faculty of Dentistry of the University of Toronto

(c) That in pursuing this Study, I will attend regularly all prescribed didactic, laboratory and infirmary instruction in each of the several years, and will give diligent attention to the work required of me.

(d) That during my course I will loyally conform to the requirements of the Act respecting Dentistry, and of the By-Laws, Rules and Regulations prescribed from time to time by the Directors of the Royal College of Dental Surgeons and the University of Toronto, as necessary to secure needful order and discipline in the interests of the whole student body

(e) That I will endeavour at all times to promote good fellowship among my class mates, and to maintain and protect the reputation of the University.

(f) That when authorized to practise Dentistry, I will conduct my practice ethically, and will make every reasonable effort to elevate the Profession of Dentistry and maintain its dignity and good name.

(g) I hereby agree to be registered on probation, and will withdraw upon request should the Faculty Council determine such a course advisable.

#### ADMISSION TO ADVANCED STANDING

Any student of another University or College who desires to be admitted to the Faculty of Dentistry of this University with equivalent standing is required first to communicate with the Registrar of the University, forwarding to him a full statement of preliminary education with

certificates. After receiving notice from the Registrar that the entrance requirements have been met, the student should send an application to the Secretary of the Faculty of Dentistry together with—

(a) A calendar of the University in which he has studied, giving a full statement of the courses of study.

(b) A complete official statement of the course he has followed and the standing obtained in percentage.

(c) A certificate of moral character and conduct.

After submission of this application to the Faculty Council the candidate will be notified as to the decision reached.

No student from the Faculty of Dentistry of another University will be accepted unless his certificates show that he has completed without condition the work and examinations in the subjects for which the certificates are presented.

For detailed information regarding licensure, see page 51.

Candidates admitted to advanced standing and proceeding to the degree of Doctor of Dental Surgery are required to write only upon the examinations of the year or years in which they are enrolled. All candidates desiring to qualify for License to practice Dentistry in the Province of Ontario are required to write upon the examinations of the Second, Third, Fourth and Fifth years.

## REGISTRATION

Students desiring to enter the course in Dentistry are requested to submit their application form in duplicate, along with the certificates on which they claim entrance standing, to the Registrar of the University, in Simcoe Hall, on or before August 31st. Each candidate will be notified as to whether his application has been accepted or not (a card of admission being enclosed to those applicants who are accepted).

On presentation of this card on or before the day of registration, September 29th, to the Secretary of the Faculty of Dentistry, candidates will be officially registered by him as students in Dentistry.

On September 29th a student shall present himself in person at the Dental Building for his registration card. No student shall be allowed to register in the Faculty of Dentistry after the first day of the term except by the permission of the Faculty Executive and the payment of a fine of five dollars for the first two days and an additional fine of one dollar for each succeeding day. Such consent will not be given after ten days. No student shall be admitted to any laboratory or clinical class after its first meeting except at the discretion of the instructor concerned.

No student shall be permitted to register in the second or any succeeding year until he has completed all the examinations of the preceding year.

Only under exceptional circumstances shall a student be permitted to repeat his year more than once.

Subdivision into sections and clinical classes will be made by the Secretary. Students wishing to be placed in the same section or clinical class shall file personally signed applications conjointly with the Secretary on or before June 1st.

## REGULATIONS

### INSTRUMENTS AND BOOKS

In order to ensure that every student has a complete outfit of approved instruments the Faculty Executive, in co-operation with representatives of the Students' Parliament, called for tenders, and have awarded contracts for students' instrument kits for First, Second, Third, Fourth and Fifth Years, as follows.

First Year, Goldsmith Bros., Smelting & Refining Co	\$ 5 86
Second Year, National Refining Co . . . . .	116 04
Third Year, National Refining Co . . . . .	99 18
Fourth Year, Ash-Temple Co. . . . .	65 58
Fifth Year, National Refining Co . . . . .	14 03

Every student will be required to submit, at time of registration, receipted statement showing that the authorized instrument kit has been purchased as above. This provision will obviate delay in class work through students being unprepared to proceed with their work

### STERILIZERS

The tender for sterilizers was accepted at \$31 00 each. This tender was awarded to The Dental Company of Canada, from whom a receipt for purchase of sterilizer will be required of members of the Fourth Year class

### DENTAL ENGINES

Tenders for Dental Engines have been received as follows

#### *Ash Foot Engines*

<i>Cable Type</i> —Complete with slipjoint, No. 7, and Contra-Angle Handpieces . . . . .	\$50 65
<i>All Cord Type</i> —Complete with Doriot Handpiece and Contra-Angle Attachment . . . . .	58 50

#### *S.S. White Foot Engines*

<i>Cable Type</i> —Complete with slipjoint, No. 7, and Contra-Angle Handpieces . . . . .	63 75
<i>All Cord Type</i> —Complete with Doriot Handpiece and Contra-Angle Attachment . . . . .	67 50

All Second Year students are required to provide themselves with a dental engine and are left free to make their own selection. The head of the Department will advise the members of the Class when the foot engine will be required.

## ADDITIONAL SUPPLIES

Additional instruments and supplies will be required in various laboratories, including materials for dental technic cases. The total cost will approximate \$25 for the session. Professors will instruct students regarding the purchase of these from time to time as they may be required.

## ATTENDANCE

Students in all years are required to meet the following attendance regulations during each session:

(a) 75% of lectures.

(b) 90% in laboratory course, infirmary work and clinics.

All technic work in all years must be done in the College Laboratories under the direction of the Professors or Demonstrators, and in accordance with the regulations laid down by the Professor. Work must be completed by a specified time and handed to the Demonstrator for submission to the Examiner.

STUDENT INDENTURESHIP—SUMMER INFIRMARY  
SESSION

Students who have completed the Fourth Year are required, during the summer, either to be indentured with an approved Licentiate for at least two months, or spend one month in satisfactory service in the Infirmary. For this purpose the Infirmary will be open during May, June and September.

Before enrolment in the Fifth Year students who have been indentured are required to present a certificate from their preceptor stating that student has rendered at least two months of satisfactory service in his office, and giving a summary of the work accomplished.

During the period between College Sessions students of earlier years are urged to spend, under indenture, as much time as possible in the office of an approved practising Dentist.

A matriculated student, who has attended at least one session in the Faculty of Dentistry, and who, during any of the intervals between College sessions, acts as assistant in the office of an ethical Dental Practitioner in Ontario, may place himself under the protection of the law by signing an agreement in the form approved by the Board of Directors of the R.C.D.S. and filing a copy with the Dean. Upon application to the College Office, blank forms will be furnished students for this purpose. Such agreements cover a period of five months only, and may be renewed, provided the applicant attends College during the interval.

Students are reminded that signing an agreement with a licentiate gives no legal right to perform dental operations elsewhere than under

the immediate personal supervision of their preceptor or other licentiate. See sub-sections 1 and 3 of Sec. 25 of the Dentistry Act.

No student shall, while in attendance at the Faculty of Dentistry, engage in practice for his own pecuniary benefit, either in the Infirmary or elsewhere, nor shall he at any time perform any dental operations elsewhere than in the College or in the head office of his registered Preceptor. This regulation shall not prevent a regularly indentured student from receiving from his Preceptor remuneration for his services. Violation of this section will render the offender liable to immediate suspension from all the privileges of a student of Dentistry.

## EXAMINATIONS

Promotions from one year to another are made on the results of the term work and the annual examinations. A Student proceeding to a degree must pass all the term work and the examinations in the subjects of his course and at the periods arranged from time to time by the Council.

Term examinations may be held in any subject and at any time at the discretion of the instructor or by order of the Council, and the results of such examination may, if the Council so decides, be incorporated with those of the annual examinations in the same subjects.

Each candidate must file an application for the Annual or Supplemental Examination according to a printed form in the Secretary's Office on or before March 15th, 1926. Students presenting applications after this date must pay an additional fee of One Dollar.

No candidate will be admitted to the Annual or Supplemental Examinations unless he has paid all the fees due from him.

No candidate in a course involving practical work in laboratory or clinic will be admitted to the Annual or Supplemental Examinations if the Professor under whom his work is carried on reports in writing to the Secretary that he has not done satisfactory laboratory or clinical work, or has signally failed in the practical examinations.

Undergraduates who have been prevented from attending the Annual Examinations by sickness, domestic affliction, or other causes beyond their control, may make application for permission to present themselves for examination at the Supplemental Examinations in September, enclosing satisfactory evidence of the cause of absence.

Term credits are determined by reports from the Professors based upon the following considerations:

- (1) Attendance.
- (2) Attention to duties.
- (3) Recitation or oral quiz.
- (4) Written quiz.
- (5) Term examination.
- (6) Practical work.

In those subjects where a term credit is given, such credit is averaged with the mark awarded upon the final paper, and the average of these two must be at least a pass. When a candidate has less than a pass, he is required to raise the average to pass standard by obtaining sufficient marks in that credit in which he is deficient.

Pass standing must be obtained in all laboratory courses, independent of written paper

No supplemental courses will be held in laboratory, infirmary or clinical work

### FINAL EXAMINATIONS

Examinations will be held in the following subjects:

#### FIRST YEAR (PRE-DENTAL)

Written. Anatomy (Comparative), Biology, Chemistry, English, Ethics, Dental Physics, Applied Psychology and Economics.

Practical. Shop Work.

#### SECOND YEAR

Written. Chemistry, Anatomy, Osteology, Dental Anatomy, Histology, Operative Dentistry, Prosthetic Dentistry and Crown and Bridge, Metallurgy

Practical. Dissection, Drawing, Modelling, Operative, Prosthetic.

#### THIRD YEAR

Written. Chemistry, Materia Medica and Pharmacology, Applied Chemistry and Metallurgy, Operative Dentistry, Physiology, Prosthetic Dentistry and Crown and Bridge, Physiological Physics.

#### FOURTH YEAR

Written. Bacteriology and Pathology, History of Dentistry, Ethics and Jurisprudence, Exodontia and Anaesthesia, Operative Dentistry (Ceramics, Radiography), Orthodontia, Preventive Dentistry, Prosthetic Dentistry and Crown and Bridge

#### FIFTH YEAR

Written: Medicine, Operative Dentistry, Orthodontia, Pathology, Preventive Dentistry, Prosthetic Dentistry and Crown and Bridge, Surgery, Dental Economics

The minimum pass standard in each subject of examination is 50%.

A statement will be sent to each student showing the rank he obtained in each subject of the Annual Examinations and also his standing in the class

Rank in each subject will be indicated as follows.

A. 85—100.

B. 70—84.

C. 50—69.

D. Below 50—Failure.

Answer papers will be re-read in each subject in which a candidate obtains less than 50 per cent., and no appeal will be considered for further re-reading of such papers. In no case are marks to be given.

#### FIRST YEAR

1. Candidates with D standing in any laboratory course, or with D standing in three or more written examinations, are not permitted to take supplementals.
2. Candidates who have passed all laboratory courses, but who have D standing in one or two written examinations may present themselves at the supplemental examinations next ensuing.
3. Candidates referred to in paragraph 1, and also those who have D standing in any supplemental examination, will only be permitted to repeat the first year under very exceptional circumstances and must obtain the written permission of the Faculty Council before being allowed to register.

#### SECOND AND THIRD YEARS

1. Candidates with D standing in any laboratory course, or with D standing in three or more written examinations, are not permitted to take supplementals. Such candidates are required to repeat the entire work of the year, including the examinations in every subject of that year.
2. Candidates with D standing in one or two written examinations may present themselves at the supplemental examinations next ensuing.

#### FOURTH AND FIFTH YEARS

1. Candidates with D standing in any laboratory or clinical course, or with D standing in three or more written examinations, are not permitted to take supplementals. Such candidates are required to repeat the entire work of the year, including the examinations in every subject of that year.
2. Candidates with D standing in one or two written examinations may present themselves at the supplemental examinations next ensuing.

#### AUTHORIZED TEXT-BOOKS

Owing to the transfer of the School of Dentistry of the Royal College of Dental Surgeons to the University of Toronto some delay has been occasioned in the completion of the official list of compulsory texts

At the time of going to press, it is impossible to state the exact cost of books for each class, Session 1925-26, but, as a guide to the students, it may be stated that the cost of books last session was as follows.

First Year . . . . .	\$13.90
Second Year . . . . .	35 75
Third Year . . . . .	6 90
Fourth Year . . . . .	37 00
Fifth Year . . . . .	3 00



Students of all years are required to secure books at the Students Book Department of the University at the special price arranged, and the Department has been appointed to provide sufficient books to meet the needs of all students

Receipt for the payment of books, issued by the Students Book Department, must be presented by students at time of registration.

*See list of Text-books at back of Calendar.*

### REMOVAL OF CONDITIONS

Students of the Faculty of Dentistry are required to remove all conditions in a lower year before proceeding to a higher year. In view of this regulation, and as a convenience to students from outside the Province of Ontario, written supplemental examinations may be held in any Province of Canada during September of each year.

Arrangements will be made for students to write these examinations at the several provincial universities at the following points:

Vancouver, B.C.	Winnipeg, Man.	St John, N.B.
Edmonton, Alta.	Toronto, Ont	Halifax, N.S.
Saskatoon, Sask.	Montreal, Que.	Charlottetown, P.E.I.

As students are not permitted to register until all conditions are removed, it is recommended that students who write these examinations at points outside the Province of Ontario remain at their home addresses until they receive notice by telegram of the removal of their conditions.

Owing to the greater time involved in arranging for examinations at points outside Toronto, it is necessary that applications for such examinations be in the hands of the Dean by June 25th, 1925

### REQUIREMENTS FOR GRADUATION

To be of good moral character.

To be of the full age of twenty-one years.

To have complied with the regulations of the Faculty of Dentistry respecting Matriculation.

To have attended five full Courses of Lectures in the Faculty of Dentistry, except in the case of students who have been admitted to advanced standing from other Colleges or Universities

To have completed all practical work in accordance with the rules and regulations of the Faculty, paid all fees, and passed satisfactorily all examinations prescribed.

### REGULATIONS RELATING TO STUDENTS IN ATTENDANCE

No student will be allowed to continue in attendance, whose presence is deemed by the Council of the Faculty to be prejudicial to the interests of the University.

Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

Unless special permission is granted by the Council, a student who, at the close of two sessions in the University, has failed to secure standing in his year, will not be permitted registration in the Faculty of Dentistry.

The Students' Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power, subject to the approval of the Caput, to deal with violations of the regulations governing conduct.

Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities, after application by the Executive of the Students' Administrative Council, will be severely disciplined.

All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Caput.

A student who is under suspension, or who has been expelled from the University, will not be admitted to the University buildings or grounds.

The constitution of every University society or association of students in the Faculty of Dentistry and all amendments to any such constitution must be submitted for approval to the Caput. All programmes of such societies or associations must, before publication, receive the sanction of the Caput through the President. Permission to invite any person not a member of the faculty of the University to preside at or address a meeting of any society or association must be similarly obtained.

The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

Waste of material or destruction of apparatus in the laboratories or the destruction of college property in general, will be charged against the individual student, section, or class.

## SMOKING

The Faculty considered the whole question of smoking in the College premises, and decided that it would not be fair to the student if he were permitted to acquire the habit of smoking during office hours, and consequently it was decided to enforce rigidly the regulation prohibiting smoking.

The regulation applied to the entire premises, both within the building and without.

A breach of this regulation may lead to suspension.

## PHYSICAL TRAINING

By order of the Board of Governors each male student proceeding to a degree must take Physical Training in the first and second years of his attendance. He must first undergo a medical examination by the Director of the University Health Service and must then register for Physical Training at the office of the Athletic Association in Hart House. Students of all years who wish to take part in any form of athletics or physical exercise, must first undergo a medical examination by the Director.

Each woman student proceeding to a degree in Dentistry and enrolled in the Faculty of Dentistry shall be required, during the first year of her attendance, to take Physical Training following upon an examination by the Medical Advisor for Women.

The student who has failed to complete satisfactorily the course in Physical Training prescribed for the First Year, will not be permitted to register in the Third Year; and the student who has failed to complete satisfactorily the course in Physical Training prescribed for the Second Year, will not be permitted to register in the Fourth Year.

The student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year, must take this work during the Second or Third Year respectively of his course, and will be required to pay a supplemental fee of \$10 in addition to the prescribed Physical Training fee.

## FEES

## UNIVERSITY FEES

All University fees are payable at the office of the Bursar of the University, Simcoe Hall, between the hours of ten and one o'clock, except on Saturday.

Every student proceeding to the degree of Doctor of Dental Surgery shall, in each of the First, Second, Third, Fourth and Fifth Years pay an annual fee, including tuition, library, laboratory supply and one annual examination as follows:

If paid in full on or before October 20th... .. \$200.00

By instalments—

First instalment, if paid on or before October 20th... .. 100 00

Second instalment, if paid on or before January 20th. .... 100.00

## HART HOUSE FEE

The annual fee... .. \$8 00

Every male student in attendance proceeding to the degree of Doctor of Dental Surgery is required to pay to the Bursar before December 1st the annual fee of eight dollars for the maintenance of Hart House. If this fee is not paid by the above date a penalty of two dollars will be imposed, making the total fee ten dollars.

# STUDENTS' ADMINISTRATIVE COUNCIL FEE

The annual fee . . . . . \$3 00

Every male student in attendance proceeding to the degree of Doctor of Dental Surgery is required to pay to the Bursar at the time of the entry of his name with the Registrar the annual fee of three dollars for the maintenance of the Students' Administrative Council.

# WOMEN STUDENTS' ADMINISTRATIVE COUNCIL FEE

The annual fee . . . . . \$3 00

Every woman student proceeding to the degree of Doctor of Dental Surgery is required to pay to the Bursar at the time of the entry of her name with the Registrar the annual fee of three dollars for the maintenance of the Women Students' Administrative Council.

# MEN'S PHYSICAL TRAINING FEE

The annual fee . . . . . \$5 00

Every male student in attendance proceeding to the degree of Doctor of Dental Surgery is required to pay to the Bursar the annual Physical Training fee of \$5.00 at the opening of each session in which Physical Training is compulsory for such student.

# WOMEN'S PHYSICAL TRAINING FEE

The annual fee . . . . . \$4.00

Every woman student in attendance proceeding to the degree of Doctor of Dental Surgery is required to pay to the Bursar the Physical Training fee of \$4.00 at the opening of each session in which Physical Training is compulsory for such student.

# SUPPLEMENTAL PHYSICAL TRAINING FEE

The supplemental fee . . . . . \$10.00

Every student who has neglected to complete satisfactorily the course in Physical Training of the First or Second Year and who must take this work during the Second or Third Year respectively of his or her course, will be required to pay to the Bursar at the opening of the session a supplemental fee of \$10.00 in addition to the prescribed Physical Training fee.

# SUPPLEMENTAL EXAMINATION FEES

Written Supplemental Examination, \$10.00 each subject; maximum \$20 00  
Written Supplemental Term Examination . . . . . 3 00

# AD EUNDEM FEE

For admission to advanced standing . . . . . \$10 00

## FACULTY FEES

## STUDENTS' PARLIAMENT FEE

The annual fee . . . . . \$4 00

Every student proceeding to the degree of Doctor of Dental Surgery shall pay to the Secretary of the Faculty at the opening of the Session an annual fee of \$4.00 for the maintenance of the Students' Parliament of the Faculty of Dentistry.

## CAUTION AND DEPOSIT FEE

\$10 00

## ESTIMATE OF EXPENSES

## FIRST YEAR

Tuition Fee . . . . .	\$200 00
Caution Fee. . . . .	10 00
Students' Parliament Fee . . . . .	4 00
U. of T. Students' Administrative Council . . . . .	3 00
Hart House, Men's Fee. . . . .	8 00
Physical Training, Men's Fee . . . . .	5 00
Text-books . . . . .	13 90
Instruments . . . . .	5 86
Supplies (approximately) . . . . .	25.00
	<hr/>
	\$274 76

For women students, the physical training fee is \$4.00, and there is no Hart House fee. Total expenses, women students.. \$265 76

## SECOND YEAR

Tuition Fee . . . . .	\$200.00
Caution Fee... . . . .	10.00
Students' Parliament Fee . . . . .	4.00
U. of T. Students' Administrative Council... . . . .	3.00
Hart House, Men's Fee . . . . .	8.00
Physical Training, Men's Fee .. . . .	5.00
Text-books . . . . .	35 75
Instruments . . . . .	116 04
Dental Engine. . . . .	60 10
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	\$441 89

For women students, there is no physical training in Second Year, and no Hart House fee. Total expenses, women students... \$428.89

## THIRD YEAR

Tuition Fee .....	\$200 00
Caution Fee .....	10.00
Students' Parliament Fee .....	4 00
U. of T. Students' Administrative Council..	3 00
Hart House, Men's Fee ....	8 00
Text-books.....	6.90
Instruments..	99.18
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	\$331.08
For women students, no Hart House fee ..	\$323.08

## FOURTH YEAR

Tuition Fee ...	\$200 00
Caution Fee .....	10.00
Students' Parliament Fee..	4 00
U. of T. Students' Administrative Council...	3.00
Hart House, Men's Fee ...	8 00
Text-books .....	37.00
Instruments . . .	65 58
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	\$327.58
For women students, no Hart House fee....	\$319 58

## FIFTH YEAR

Tuition Fee.....	\$200 00
Caution Fee. . .	10 00
Students' Parliament Fee ...	4.00
U. of T. Students' Administrative Council .	3 00
Hart House, Men's Fee....	8.00
Text-books .. .	3 00
Instruments . . .	14 03
	<hr/>
	\$242.03
For women students, no Hart House fee.....	\$234 03

Total for men. ....	\$1,617 34
Total for women . . .	1,571 34

## CURRICULUM

## FIRST YEAR (PRE-DENTAL)

Lectures—Inorganic Chemistry, Dental Physics, Biology and Embryology, English, Hygiene, Ethics, Comparative Dental Anatomy, Applied

Psychology and Economics, Science and Civilization, Preventive Dentistry, Principles of Dental Technics.

Laboratory—Biology, Modelling, Inorganic Chemistry, Drawing, Shop Work, Dental Physics, Dental Anatomy, Physical Training.

#### SECOND YEAR

Lectures—Analytical Chemistry, Organic Chemistry, Human Anatomy, Dental Anatomy, Histology, Prosthetic Dentistry, Crown and Bridge, Applied Chemistry and Metallurgy, Operative Dentistry, Physiology, Preventive Dentistry.

Laboratory—Dental Anatomy, Histology, Prosthetic Dentistry, Operative Dentistry, Analytical Chemistry, Dissection, Applied Chemistry, Physical Training.

#### THIRD YEAR

Lectures—Organic Chemistry, Histology, Biochemistry, Dental Surgery and Anaesthesia, Metallurgy, Physiology, Materia Medica and Pharmacology, Operative Dentistry, Preventive Dentistry, Prosthetic Dentistry, Applied Chemistry and Metallurgy, Crown and Bridge, Histology, Physiological Physics, General Pathology and Bacteriology.

Laboratory—Organic and Physiological Chemistry, Metallurgy, Operative Dentistry, Prosthetic Dentistry, Crown and Bridge, Physiology, Pharmacology, Physics, Dental Anatomy.

#### FOURTH YEAR

Lectures—Dental Pathology and Bacteriology, Dental Surgery and Anaesthesia, Operative Dentistry, Preventive Dentistry, Orthodontia, Electro-therapeutics, Prosthetic Dentistry, Ceramics, Crown and Bridge, Applied Psychology and Economics, Periodontia, History of Dentistry, Jurisprudence, Ethics

Laboratory and Infirmary—Bacteriology and Pathology, Dental Anatomy and Anaesthesia, Operative Dentistry, Prosthetic Dentistry, Ceramics, Crown and Bridge, Orthodontia, Clinical Dentistry.

#### FIFTH YEAR

Lectures—Medicine, Surgery, Dental Pathology, Orthodontia, Operative Dentistry, Prosthetic Dentistry, Crown and Bridge, Preventive Dentistry, Applied Psychology and Economics, Dental Surgery and Anaesthesia, Periodontia.

Laboratory and Infirmary—Clinical Dentistry.

## OUTLINE OF COURSES OF INSTRUCTION FOR DENTAL UNDERGRADUATES

### OPERATIVE DENTISTRY AND THERAPEUTICS

The subjects of this course extend over four years. Operative Dentistry is so intimately associated with Dental Anatomy that these courses run concurrently during the Second and Third Years. The Fourth and Fifth Years are devoted to the application to practice of what has been learned.

#### SECOND YEAR

The course in this year follows closely on the lectures and laboratory work in Biology, Embryology, General Anatomy and Histology, beginning with a discussion of their application to operative practice. Anatomic restorations in wax are made of defective and decayed teeth so that the student may get, as soon as possible, an appreciation of the skill necessary to make normal tooth restorations. This exercise is followed by a study of the physical characteristics of enamel and dentine.

The student selects many decayed teeth, and by actually cutting, splitting and grinding the enamel, he learns its behaviour under instrumentation. By the aid of such teeth he gets his first lessons in the causes and treatment of Dental Caries. Various methods of treatment are presented, and in one or two general lectures the broad principles of disease and cure are presented. Instruction in cavity preparation is given in lectures, demonstrations, recitations, and practice on large plaster teeth. The plan is followed of having the student first prepare a typical cavity in a large plaster tooth, then in a natural tooth, and finally in a typodont. During the year the student is expected to get instruction in the general principles of the casting process as applied in dental practice. He is expected to make several castings so as to fasten the principles in his mind. Some of the simple filling materials are studied during the closing days of the course.

#### THIRD YEAR

The course in the Third Year begins with a rapid review of Dental Anatomy and Histology. Cavity nomenclature and instrument study are carefully gone into at this time. All the work of the previous year is reviewed and extended to the complex procedures of practice. Inlays, gold, amalgam, cement, and gutta percha are studied and manipulated. Many specimen operations and test fillings are required. The internal anatomy of the tooth is now taken up in particular in preparation for the study of pulp and root canal treatment which follows.

Introductory lectures are given on the subject of toothache, dental alveolar abscess, devitalization of the dental pulp and filling root canals of teeth. Practical work goes hand in hand with all lectures and demonstrations. Exclusion of moisture from teeth follows. Student patients are



used for practical work in this subject, and the same plan is followed in the study of prophylaxis.

Lectures, demonstrations and technic work go hand in hand in the laboratory course. The subjects of Dental Caries, Dental Anatomy, and Cavity Preparation are carefully reviewed. Extensive restorations are made in amalgam, gold inlays, gold foil, as well as the cements. Abutment and attachment preparations are made for teeth to be used in the Prosthetic Department. Dental pathology and therapeutics are reviewed. Each student is required to know how to make and develop X-ray pictures of teeth upon which he is operating as technic work, as well as for patients. Root canal treatment is practised on extracted teeth and cadavers from the dissecting room. A complete course is given in dental ceramics, including jacket crowns and porcelain dentures. The general lectures begin as soon as the students are ready for infirmary practice, and cover the whole subject.

Before students are permitted to go into the Infirmary to practise on patients, they must pass an oral examination on the subject of dental practice, conducted by the heads of the departments.

At the end of this year it is expected that many students may have an opportunity to get some operative practice in a dentist's office or in the Infirmary.

#### FOURTH YEAR

During the first few weeks of the course the students are given clinics on the reception and examination of patients, methods of practice and details of technic. The student repeats the main operations of practice, first in the laboratory and then for patients.

The lectures begin by a review of the subjects in general as applied to practice and then are followed as they are met with in the Infirmary. The chief idea is to teach the Fourth Year student the fundamentals of operative dentistry and therapeutics in the order they are met with in practice.

#### FIFTH YEAR

This is the year for the study of exact methods and the development of the reasoning faculties as applied in diagnosis, treatment and prognosis.

A wide course of reading is prescribed followed by conferences and essays.

A feature is made of clinics for examination and treatment, as well as technic to illustrate principles. Students are expected to present some form of individual work for examination. The lectures cover a review of operative dentistry and therapeutics, with special stress upon the modern methods of practice which have not yet reached the text-books. This is a special clinical year in which the student will have an opportunity to develop his mind and hand.

## DENTAL ANATOMY, HUMAN AND COMPARATIVE

## FIRST YEAR

The course in this subject begins in the First Year and is continued through the Second and Third Years under the personal supervision of the Professor. It is one of the foundation subjects upon which is based the study of Operative Dentistry, Prosthetic Dentistry, Crown and Bridge Work, Orthodontia, Exodontia, Periodontia and Preventive Dentistry. It is closely associated with subjects of Physiology, Histology, Bacteriology, Pathology and Oral Hygiene.

The studies of the First Year will begin with a brief reference to the classifications of the Animal Kingdom and will include the whole subject of Comparative Dental Anatomy.

## SECOND YEAR

During the Second Year the study in this subject will consist of a brief review of the previous year's work, and a minute study of the external anatomy of the teeth of man and associated dental tissues.

## 1. Teeth of Man—Deciduous and Permanent Dentitions.

- (a) Process and time of calcification, eruption, absorption, succession, arrangement in arch, relation to surrounding tissues, etc.
- (b) Minute study of external anatomy of each tooth.
- (c) Functions of various parts of each tooth
- (d) Peridental membrane, alveolar process, etc.
- (e) Occlusion.
- (f) Effect of natural physical forces on shape of arches and on occlusion.
- (g) Malformations due to loss of these forces, to traumatic occlusion and to habits
- (h) Effect upon remaining teeth from loss of one or more teeth, *e.g.*, drifting, traumatic occlusion, etc.

## 2. Changes in Edentulous Arches.

In the laboratory the student will make drawings of the geometrical figures involved in the outlines of the teeth, outline sketches of the different teeth in the human denture, and will follow this by moulding some of the teeth, enlarged three times, in impression compound. Exercises will be given in carving vegetable ivory blocks to definite geometrical form according to accurate measurements. This will be followed by carving a set of twenty-eight teeth in vegetable ivory, which will be set up on an articulator resembling as closely as possible the arrangement in the natural dental arches of man.

Longitudinal and cross sections of extracted teeth will be made by the student for the study of internal dental anatomy. Students are advised to bring with them as many extracted teeth as they may be able to obtain.

Additional exercises may be given to any or all members of the class at the discretion of the staff in charge of the study of Dental Anatomy.

#### THIRD YEAR

In the third year the internal anatomy of each tooth will be studied. Special attention will be given to the thickness of the hard tissues at different locations, position, size and shape of pulp chambers, root canals, apical foramina, etc., in each tooth.

### PROSTHETIC DENTISTRY

#### SECOND YEAR

Lectures—The subject is introduced by definitions and a reference to its relation to dental science, followed first by a survey of the Structure and Function in complete natural dentures, and second, the causes and effect of the edentulous or the semi-edentulous state, in each case as concerned in Prosthetic Dentistry (including Crown and Bridge Work).

The technology of the more important prosthetic materials is considered, followed by an analysis of the more important types of artificial restorations and their component parts.

Laboratory—A series of exercises, which are planned to familiarize the student with all of the phases of Prosthetic Dentistry which may be taught outside the mouth, are partially completed in this year.

#### THIRD YEAR

Lectures—The course follows the work of the Second Year by a consideration of the principles of examination of the edentulous mouth. A standard schedule of sittings and intervals in typical Full Upper and Lower, also Full Upper or Lower against natural teeth here follows, based on the use of the Snow apparatus. The principles of impression making and of occlusion as related to Full Denture Prosthesis are given special consideration.

The subject of Crown and Bridge Work is begun in this year by a study of the various root preparations, and of the simpler forms of Crown and Bridge Work.

The Laboratory course, begun in the Second Year, is carried to completion in this year.

#### FOURTH YEAR

Lectures—The course opens with an advanced study of the restoration of the edentulous mouth with special reference to Esthetics. This is followed by a consideration of the care of the semi-edentulous mouth, and of the standard parts used in Partial Denture service. In Crown and Bridge Work a study of advanced root preparations is followed by classification, restorations, repairs, and other phases of the Service.

Laboratory—At this stage the student deals with the actual patient, and the laboratory work consists of that for practical restorations in the Clinical Department.

#### FIFTH YEAR

Lectures—These lectures are devoted entirely to practice and include Studies in Abnormal Conditions in Full Denture work, and in Crown and Bridge Work, and are followed by a consideration of Design and its preliminary consideration of Partial Denture service. Partial Denture classification, and the subsequent phases of Construction, Insertion and Maintenance are here considered.

Studies in Surgical Prosthesis are followed by a survey of advanced methods of Occlusion applied to all branches of Prosthesis and include Gysi, Hanau, and other systems.

Laboratory—All laboratory work is done in the Clinical Department and for patients in the Infirmary.

#### PHARMACY AND PHARMACOLOGY: MATERIA MEDICA

A course of lectures, accompanied by laboratory work which will serve to amplify and illustrate the lectures, will be given in the Third Year. The subject matter of the course will deal chiefly with those drugs which the student of Dentistry has occasion to use, though other drugs will be used in order to draw attention to pharmacological principles and to illustrate them. The chief object of the course will be to inculcate in the student accurate habits of thought in regard to the pharmacological substances that he will employ, and to enable him to absorb and understand new conceptions as they are brought to his attention by the developments of science. In the laboratory work a great deal of attention will be directed to the accuracy of the use of language in describing observations and drawing conclusions from them.

In view of the importance of the local and general anaesthetics, particular attention will be paid to them both from the standpoint of their anaesthetic value and their toxicity so that the student should become familiar with the principles underlying their use, and also certain of the most usually employed drugs themselves.

#### ORTHODONTIA

##### FOURTH YEAR

In the lectures to the Fourth Year is given in detail the taking of impressions and making models for orthodontia purposes, normal occlusion and malocclusion, with the forces governing each, the physiology and mechanics of tooth movement, the effect upon occlusion of the presence of adenoids, enlarged tonsils, and habits, the effect of malocclusion upon

mastication and facial symmetry, the etiology, diagnosis, and classification of malocclusion.

Appliances are studied in general, and those for the correction of simple cases in detail. Models of the different types of malocclusion will be presented on the screen, with pictures showing the characteristic facial symmetry resulting from each type. The treatment and retention of simple cases are discussed.

#### FIFTH YEAR

Lectures are given reviewing the treatment of cases.

In the Infirmary the students treat simple cases under the direction of the professor and his assistants.

### SURGERY

#### FIFTH YEAR

The course in surgery will include lectures and clinics on the general principles of Surgery, Surgical Pathology and Oral Surgery, special attention being given to all surgical conditions of the mouth and associated parts, such as hare lips, cleft palate, antral infections, necrosis, tumors, etc. The clinics are given in the surgery at the College and at the hospitals in the city.

Each student in the Fifth Year is expected to review his Anatomy in the dissecting room and time is arranged for a short course.

### OSTEOLOGY AND ANATOMY

The course in the gross anatomy of the human body runs throughout the second year, occupying one lecture hour and four laboratory periods of two hours each per week. During this course the student is required to dissect the whole upper half of the body, and to study in detail the structure and relations of all structures met during the dissection.

Special study of the bones of each region is undertaken, preliminary to the dissection of such a part. Lectures and demonstrations in Osteology are so arranged that the student studies the bones in relation to his actual dissection. Charts and drawings are used to demonstrate the various structures. Bones are provided by the College, and on payment of a small deposit are loaned to the student.

The dissection is divided into several parts corresponding with the various regions into which the body is naturally subdivided. On completion of the work on each part, every student is required to pass an oral test of his knowledge of the work recently done before proceeding to the next section. The series of marks obtained is the student's credit for term work. In addition, term and final examinations are held.

The practical application of the knowledge of the anatomy of each part is emphasized wherever possible. Lectures are so arranged as to review work recently done in the dissecting room, and to correlate and amplify and show the practical application of the knowledge gained there.

All the facilities of the dissecting room are of the latest and most complete character, and the student does his dissecting under the most favourable conditions in a recently constructed, well-lighted laboratory.

Closely related classes which are correlated with the gross anatomy, and serve to further elucidate the structure of the human body and to show the practical application of this knowledge, are Art (including modelling and drawing of bodily structures), Biology, Comparative Dental Anatomy, Dental Anatomy, Histology, Embryology, Physiology and Applied Anatomy.

## PHYSIOLOGY AND HYGIENE

### THIRD YEAR

The course in Physiology is taken in the Third Year. The professor will take up the proximate principles, food, starvation, the various diets; the circulation of the blood; respiration, digestion, the nervous system, the kidney and its functions; the skin and the muscular system.

The lectures will be illustrated by drawings, charts, and physiological apparatus

### PRACTICAL PHYSIOLOGY

This course in the laboratory is designed to give the student a practical knowledge of the methods used in obtaining the facts of this science. It will include: Introduction to the metric scale, weighing foods, estimating calories, testing foods, experiments with muscle; the electric phenomena of muscle, electronus, demonstrations on the circulation, blood pressure; blood counting, the spirometer, artificial respiration; experiments demonstrating digestion; experiments on the kidney, experiments on the brain.

## CROWN AND BRIDGE

This important branch of modern dentistry is taught conjointly by the Prosthetic and Operative Departments in the Second, Third, Fourth and Fifth Years of the course, both by lecture and laboratory work.

### SECOND YEAR

In the Second Year an elementary course is given in soldering and casting, with a short series of explanatory lectures covering the underlying principles for success in these two important subjects

### THIRD YEAR

The Third Year students are given an extensive laboratory course on foundational principles in the laboratory. Soldering, sweating, casting,

swaging, burnishing, simple inlay abutments, shell crowns, three-quarter crowns and simple bridges are taught. The different root preparations for the reception of shell crowns on natural teeth are taken up, also the making, assembling and uniting of the parts of which a bridge is made up.

#### FOURTH YEAR

In the Fourth Year the different root preparations are taught for the reception of dowel or post crowns, such as the angular base preparation, half band, full band and lingual shoulder preparations. The best methods of employing the ready-to-wear crowns, also the advantages and disadvantages of each type of preparation and crown, are discussed.

The many different forms of Pontics, where indicated, their requirements and limitations are taught. Classification of bridge work, indications and application of the different forms of abutment pieces, advantages and disadvantages of all forms of bridge work, the best methods of removing crowns and bridges, also the repairing of same and the important work of finishing, inserting and keeping in good repair are all presented.

#### FIFTH YEAR

In the Fifth Year as far as possible all crowns and bridges are constructed for patients in the Infirmary.

The lecture course includes the many variations from the standard principles taught in the preceding year, the results that may be expected of operations in this field and the dangers to be guarded against.

Special clinics are given to small groups of students on the more difficult and exacting forms of work, also any new developments and the different ways of technical procedure are demonstrated.

Students are required to write essays on different aspects of the subject, and are also called upon to discuss the lectures given.

In the laboratory the work is done for the Infirmary and the technic of the more difficult and delicate operations will be demonstrated by the professor in charge and carried out individually by the student.

### MEDICINE

#### FIFTH YEAR

Medicine includes a course of lectures and clinics in physical diagnosis, lectures on etiology of diseases, disorders of nutrition and metabolism; and the exanthemata. Special attention is given to the relation between a septic condition of the oral cavity and gastric, neurotic and other functional disturbances, the symptomology of syphilis, and other important constitutional diseases as manifested in the oral cavity; and focal infection.

The clinics are held in the medical wards of the Toronto Western Hospital and in the Infirmary of the College.

## ETHICS AND DENTAL JURISPRUDENCE

## FIRST YEAR

The Science of Ethics will be taught particularly in the First Year. The course will include a practical discussion of the underlying forces that enter into the formation of character and determine conduct. Heredity, environment and will, the human instincts and instinctive behaviour, impulse and desire, emotions and sentiments, conscience and will, character and conduct, and the moral self will be taken up in proper sequence.

Then will follow a discussion of such subjects as the standard by which we judge our conduct and the conduct of others, the moral ideal, or man's great aim in life, why should I be good? what makes an action right? The hedonistic and rationalistic theories of life, the moral institutions of civilization (the home, the school, the church, the state), the proper relationship of the individual to the state, and of the state to the individual; professional men and women as exponents of true citizenship and lofty ideals.

## FIFTH YEAR

In the Fifth Year the direct application of these principles to professional life will be discussed—the Hippocratic oath, the professional ideal, the proper ethical relations of the dentist to his patients, to his confreres, and to the profession, the ethics governing consultations, advertising and patents, will be taken up.

The course in Jurisprudence will be taken in the Fifth Year. It will include a study of the constitutional rights of the State to control the practice of dentistry through its governing bodies, the legal responsibility of the dentist to the state, and to his patients, the legal field of dentistry, the different phases of malpractice; the position of the dentist as plaintiff, defendant and expert witness before the courts. Also the special Dentistry Acts of the different provinces will be discussed.

## CHEMISTRY

The course in Chemistry is both theoretical and practical, and extends through the First, Second and Third Years. In the early part of the course, the fundamentals of Inorganic and Organic Chemistry are taught, in the latter part, special attention is paid to applications of dental importance. Wherever possible experimental illustrations are given in all lecture courses.

## FIRST YEAR

Lectures—Sixty hours, extending throughout the session. The course includes the history, properties, methods of preparation, of the most important elements and compounds, with their common commercial applications, classification; general laws and principles; and the fundamental theories of the science.



Laboratory—One hundred and eighty hours. The course is initiated with experiments of a general nature, serving to illustrate the lectures. Attention is paid to the manipulation and care of apparatus, to the preparation and study of important elements and compounds, including quantitative analysis.

#### SECOND YEAR

Lectures—Organic Chemistry—Fifteen hours. A general introduction to Organic Chemistry, dealing with the various series of compounds, their co-relations, properties and preparation of characteristic members.

Laboratory—Analytical Chemistry—Thirty hours. General methods of analysis are considered. This course is given in conjunction with a thirty hour course in Applied Chemistry.

#### THIRD YEAR

Lectures—Organic Chemistry—Thirty hours. The lecture course in Organic Chemistry is completed during the first semester in preparation of the student for his work in Biochemistry.

Laboratory—Organic Chemistry—Thirty hours. The student is required to make some organic preparations and to become acquainted with the chemical properties of compounds dealt with in the lecture course. Upon completion of this course given in the first semester the student proceeds with the Biochemistry course during the second semester.

### BIOCHEMISTRY

#### THIRD YEAR

Lectures—Thirty hours. The discussion includes a consideration of the general composition of the body, the nature of food and the processes of digestion. Emphasis is placed upon the composition of teeth, saliva, and the chemical changes produced in food by the action of bacteria in the mouth.

Laboratory—Thirty hours. The laboratory course deals with the Chemistry of Proteins, Fats and Carbohydrates. The student is required to make analysis of teeth, saliva, and some common foods. The qualitative analysis of urine is included in this course.

#### FIFTH YEAR

Lectures—Five hours. This course deals with the Chemistry of Foods and the application of Biochemistry to Preventive Dentistry.

### APPLIED CHEMISTRY AND METALLURGY

This course which, in part, deals with the chemistry of dental materials and processes, is designed primarily for the purpose of teaching the pro-

perties of the various materials used in dentistry. As much of the success of many dental operations depends not only upon the skill of the operator but also upon the suitability of the materials used, an exact knowledge of their properties is requisite.

## APPLIED CHEMISTRY

### SECOND YEAR

Laboratory—Thirty hours. Students are required to determine the composition of many compounds that are commonly used in dentistry. Their properties and uses are fully described. In this way students become familiar with the materials used in dental practice.

This course is given in conjunction with a thirty hour course in Analytical Chemistry

### THIRD YEAR

Lectures—Thirty hours This course deals chiefly with the chemistry of dental materials and processes and includes a consideration of many reactions made use of in the practice of dentistry.

Laboratory—Thirty hours The laboratory exercises comprise an intensive study of the properties of dental materials and deal with such problems as the strength of dental materials, their manipulation, volume changes, methods of casting, soldering, etc.

## DENTAL METALLURGY AND MINERALOGY

### SECOND YEAR

#### METALLURGY

Lectures—Five hours. The physical properties of metals are discussed and the important relationship of these properties to various dental operations is emphasized. In these introductory lectures an effort is made to explain the difficulties commonly experienced when working metals This course serves as an introduction to the practical exercises undertaken in the metallurgical and prosthetic departments.

#### MINERALOGY

Lectures—Five hours. The lectures include an explanation of common mineralogical terms, the occurrence of minerals, crystal forms, physical and chemical properties of minerals, etc

Laboratory—Thirty hours. The laboratory course treats mainly of methods of identification of minerals and the determination of the more important elements occurring in them The mineral species selected for study by blowpipe and wet methods are those which comprise the sources of supply of the commonly-used dental metals.

Throughout the course emphasis is placed upon the naturally occurring impurities in minerals and the effect of such impurities upon the properties of the reduced metals.

### THIRD YEAR

#### METALLURGY

Lectures—Fifteen hours Laboratory—Ninety hours. The metals used in dentistry are discussed with respect to their occurrence, reduction, properties and dental applications. A description of the rare metals is also given and their possible dental uses indicated. Methods of alloy-making are discussed and both physical and chemical means of testing same are explained. In these lectures the properties and dental uses of the precious metals and their alloys are especially emphasized.

Through the actual working of metals it is possible to acquire a considerable knowledge of their properties and this is of great assistance to students in dentistry. Hence a laboratory course of ninety hours is given. It includes such exercises as the preparation of alloys, amalgams, etc., and the determination of their properties; the refining of gold, silver, and platinum, the preparation of solders, the qualitative analysis of alloys, the quantitative analysis of alloys by both volumetric and gravimetric methods, annealing and tempering, the preparation and classification of dental cements, the preparation of low-fusing alloys; methods of melting and casting metals; classification and dental uses of abrasives; purification of mercury, etc.

Throughout this course the relationship existing between the inherent properties of dental materials and the specific uses for same is constantly stressed. In this way it is possible to overcome much of the confusion that frequently occurs in the selection of supplies.

## APPLIED PSYCHOLOGY AND ECONOMICS

### FIRST YEAR

A course of lectures is given on Economics and Applied Psychology. The object in view is to give the student an understanding of the science of Economics and its application to life's activities, a knowledge of Psychology and its relationship to attention during lectures, proper preparation of notes, analytic reading, memory development, etc. The purpose of the course is to enable the student to develop ability, reliability, endurance and will-power, so that he may obtain the greatest possible advantage from the opportunities afforded by the College.

### FOURTH YEAR

The lectures are given previous to the admittance of the student to the infirmary, and deal with the Science of Economics as applied particularly

to Dentistry. The course covers those problems peculiar to Infirmary practice, such as, Infirmary routine, making appointments, management of patients, dental supplies, sterilization, motion study and such personal factors as cleanliness, neatness, reliability and punctuality.

#### FIFTH YEAR

In the Fifth Year the course is extended and directed along practical lines enabling the student to better understand the problems encountered in the conduct of a dental practice.

The lectures include a discussion of "Success in Dentistry" and how it may be accomplished, dealing with the dentist's personal preparation (mental, moral and physical), character study and management of office and patient.

Practice Building is presented, and in this connection lectures are given on office location, office arrangement and equipment, office records, stationery, supplies and the extending of acquaintance.

Particular attention is given to the stressing of the dentist's obligations to his patient and the public, showing the relationship between service rendered and the resulting reward. The question of dental fees, the accumulation of a competence, insurance and investments is also covered.

### DENTAL SURGERY AND ANAESTHESIA

#### THIRD, FOURTH AND FIFTH YEARS

*Exodontia*—The whole subject of the extraction of teeth will be discussed at length, and will include the indications for extraction, a study of the roots of the teeth, their relation to the alveolar process, the selection of forceps and elevators, and the methods of using the same, the proper direction in the application of force, the dangers to be avoided, the accidents which may happen, and the procedure to be followed, the possibility of excessive hemorrhage, and the best means of treating the same; the preparation of the patient and the mouth for extensive extraction and the proper treatment of the mouth after the extraction. The indications, contra-indications and the surgical technic in connection with curettage, alveolectomy and the surgical removal of teeth are thoroughly discussed. The special technic and treatment necessary for the removal of suppressed and impacted teeth and cysts are dealt with. The students of the Fourth and Fifth Years, under the direction of an instructor, perform the operations which present at the clinic.

*Anaesthetics*—The course in General Anaesthesia will include a brief history of anaesthesia; the choice of an anaesthetic for dental operations; physical diagnosis, and a consideration of the conditions under which general anaesthetics are contra-indicated, the description and mode of action of Nitrous Oxide, Nitrous Oxide and Oxygen, Ethylchloride, Somnoform and the method of administration of each, the after-treatment

of the patient, the accidents which may occur, the best means of avoiding them, and the proper procedure when they do occur.

Local Anaesthesia by the different methods (infiltration, interosseous and conduction), as well as General Analgesia for the painless treatment of such dental operations as extraction, removal of pulps, preparations of cavities in sensitive dentine, are taught and demonstrated

Clinics are held at the different hospitals, where the students of the Fifth Year are allotted in turn, in groups, and where they do the extraction under ether or chloroform, administered by the hospital anaesthetists. Anaesthetic clinics are given in the Surgery of the College daily throughout the session.

The lectures and examination for the Fourth Year are based on the whole subject of anaesthesia and exodontia.

## DENTAL PHYSICS

### FIRST YEAR

The course in Physics is preceded by a short course of lectures in practical mathematics necessary to the work in physics proper. This will include mensuration, graphic representation of observations, criteria of rejection, logarithmic calculations, etc.

#### *Mechanics of Solids*

- 1 Fundamental conceptions of time, space, mass and force.  
Forces of tension, compression and shear  
Resistance of material to forces
- 2 Composition and resolution of concurrent co-planar forces, non-concurrent co-planar forces, parallel forces, couples.
- 3 Work and machines, simple mechanisms, inclined plane, wedge, lever, screw, etc. Friction, lubrication, efficiency. Power transmission.
- 4 Motion, velocity, acceleration  
Momentum and impulse, percussion. Energy transfer.  
Mechanics of occlusion

#### *Mechanics of Fluids*

1. Definition and distinctive properties of fluids. Resistance of fluids to external forces
2. Fluid pressure and its effects and applications. Atmospheric pressure. Hydraulic press, compressed air.
3. Specific gravity determinations of liquids and solids.
- 4 Siphon, pump, aspirator and other hydraulic appliances

#### *Heat*

1. Heat as a mode of motion. Relation between heat and work. Mechanical equivalent of heat.
2. Temperature and quantity of heat. Heat capacity of substances.
3. Effects of heat. Expansion of solids, liquids and gases. General gas law, absolute temperature scale

4. Latent heat of fusion and vaporization Heat of solution Cooling by evaporation, freezing mixtures, mechanical refrigeration
5. Transmission of heat, conduction, convection and radiation Conducting power of various materials.

#### *Light*

1. Laws of reflection, refraction and transmission of light
2. General spectrum of radiation and the relation of light to other manifestations of energy. Electric waves, radiant heat, ultra-violet, X-rays, etc.
3. Mirrors and lenses and the optical constants of the various forms.
4. Optical instruments with special emphasis on the microscope and the eye. Monocular and binocular vision. Optical illusions.
5. Colour phenomena. Primary and secondary colour sensations, pure and mixed colours. Colour harmony and contrast Analysis of mixed colours, shades and tints, saturation Colour matching, by natural and artificial light.
6. Illumination, general and special Lighting of offices.

#### *Electricity*

1. Natural and artificial magnets Magnetic field and magnetic flux. Magnetic induction, permeability.
2. Magnetic field in relation to electric current, electro-magnets.
3. Chemical and thermal generation of current
4. Fundamental laws of direct currents. Methods of measurement. Voltmeters, ammeters, watt meters, shunts.
5. Electro-magnetic induction, mechanical generation of current. Direct and alternating current machines.
6. Direct current series, shunt and compound wound motors and their special characteristics; alternating current motors
7. Circuits, resistances, choke coils.
8. Transformers, induction coil, etc.

### THIRD YEAR

#### *Properties of Materials*

1. Elasticity, tenacity and ductility of solids. Hooke's Law and Young's Modulus.
2. Hardness, brittleness of cements, alloys, glasses, porcelains. Resistance of abrasives.
3. Adhesion and cohesion of solids and liquids Surface tension, capillarity and osmosis Permeability of membrane and tissues

#### *Photography and Photomicrography*

1. Principles of lighting and exposure in taking photographs of models and in the mouth
2. Development and printing
3. Photomicrography of prepared sections.

#### *Mechanical Drawing*

## PREVENTIVE DENTISTRY

The object of this department is to study the causes of dental disease, and to focus the attention of the student upon the application of preventive measures to the science and practice of Dentistry, to ensure personal habits of oral cleanliness upon the part of the student, and to outline the responsibilities of the individual dentist and the dental profession toward public hygiene undertakings.

Introductory lectures are given upon Oral Hygiene and the relationship of oral cleanliness to good health, the correct technic of cleansing the teeth, frequency, care of brush, and other details.

The whole subject of mastication in its relation to preventive dentistry is stressed and particularly those phases of the subject already taught by other departments, the hygienic value of tooth-form, alignment, contact, occlusion, inter-proximal space, embrasures. The condition, care and general cleanliness of the mouth of each student is observed, and needed instruction and advice given, this latter undertaken in co-operation with the clinical department.

The whole subject of prophylaxis is covered didactically and clinically, including a review of examination of the mouth, a comprehensive review of the question of the hygienic care of artificial dentures, orthodontic appliances, bridge work and splints.

Immunity and susceptibility to dental disease are discussed from the standpoint of heredity, dental structure and development, food, saliva, habits, occupation, oral sepsis, oral cleanliness, care of the mouth in the sick room, in convalescence, during pregnancy and the injurious effects of medicines upon the teeth.

## DENTAL CERAMICS

## FOURTH YEAR

The course in the Fourth Year consists of instruction in cavity preparation for porcelain inlays, the construction and insertion of one or more inlays; also the preparation of teeth for porcelain jacket crowns and clinics on construction. Necessary lectures are given in the Laboratory.

## FIFTH YEAR

In the Fifth Year lectures are given to cover the whole subject and instruction in the Infirmary is continued throughout the session.

## HISTORY OF DENTISTRY

The subject-matter to be presented is divided into a number of distinct parts, namely: dentistry of prehistoric times, ancient times, the middle ages, modern times, and the history of dental materials, methods and the development of the various special departments of the profession.

Particular attention is given to a description of the beginnings and development of Dentistry on this continent and especially in the Dominion of Canada.

In dealing with the lives of the outstanding members of the profession, the lecturer endeavours to so present the subject that the students are led to emulate their examples.

## MODELLING

### SECOND YEAR

The object of this course is to develop the sense of form and proportion in the student.

The student is required to model different types of teeth, separately and *en bloc*, enlarged and normal size, also the skull, the head showing the muscles and the teeth and the head covered with flesh.

Students are carefully and constantly instructed in the poise and proportion of the figure, observation is cultivated and the esthetic sense developed.

## ENGLISH

### FIRST YEAR

*Composition*—Four written and two oral compositions during the year, special attention will be given to clear and concise English; making abstracts from good English prose to enable students to grasp the main thought in all their reading.

*Literature*—Oral Reading and memorizing of certain passages, reading of two standard English novels. The cultivation of a taste for good reading rather than a critical study of the texts is to be regarded as the aim of the course.

In this course instruction will be given in the correct use of written and spoken English, and opportunity will be afforded each student to acquire experience in public speaking.

## DRAWING

### SECOND YEAR

This course comprises.

Elementary perspective.

Freehand drawing from leaf and plant, form and outline.

Drawing from still life objects and the practical application of the law of perspective.

Drawing from still life and the elementary principles of light and shade. Anatomical drawing; the bones, muscles, etc., as expressed in simple line and in mass.

Colour.



## PRINCIPLES OF DENTAL TECHNICS

## FIRST YEAR

Lectures—The Dental curriculum lists thirty-one subjects, of which eighteen have a handicraft side. Out of these eighteen subjects the manipulations of eleven of these are in constant use at the bench or chair-side during routine general practice.

It is the object of the Principles of Dental Technic Course to have correlated such of this science and practice as is applicable to the seventy mechanical handicraft operations which are fundamental to dental practice, and which may be more conveniently handled in a specially designed laboratory course, supplemented by suitable didactic teaching. These are analysed to first principles.

Laboratory—A laboratory course in a specially equipped Shop Technic Laboratory has been provided, in which the student becomes familiar with the nine groups of seventy shop technic operations on materials, namely:

1. Laying out and reading drawings
2. Heat treatment of cutting parts, including hardening and tempering steel.
3. Forming, including rolling, bending, folding, molding, casting
4. Cutting, including section scraping, chiselling, filing, sawing, drilling, boring, milling, burring, threading, etc.
5. Abrasion, including grinding, honing and lapping.
6. Measuring, various methods.
7. Assembly, various processes
8. Packing and tamping
9. Finishing, including polishing, burnishing, etc.

Incidentally, the student produces twelve articles which are useful to him in the subsequent course.

## BIOLOGY

## FIRST YEAR

This course will afford an introduction to the study of Anatomy, Physiology and Histology in the succeeding years.

A series of lectures in Botany in conjunction with practical laboratory work is given. The general form, histology and chemistry of plants, from such examples as the bean plant, conifers, ferns, mosses and mushrooms, will be considered, as well as certain of the microscopic varieties. Typical examples from Canadian wild flowers, as well as some of the cultivated varieties, will be studied to illustrate the most important botanical families.

A short course of lectures in Zoology will give the general plan and features of the animal kingdom. In the laboratory work certain of the animalculæ will be studied and later well-known specimens from higher

groups, such as the earthworm, crayfish, perch, dogfish, frog, etc., will be dissected. Daily drawing of parts and features as the work progresses will be done in order to make the course as practical as possible.

## HISTOLOGY

### SECOND YEAR

The course in Histology is given in the Second Year, and will include the study of the construction and the use of the microscope, the study of the cell structure and functions, studies of the elementary tissue and the more important tissue, the embryology of the teeth, and the minute study of the several tissues of the human teeth, the pericementum, the mucous membranes and soft tissues of the mouth. The students will be taught to prepare, stain and mount sections for microscopic study.

## BACTERIOLOGY AND PATHOLOGY

### FOURTH YEAR

The course in Bacteriology is given in the Fourth Year. The professor will discuss the principles of Bacteriology, the principal bacterial forms, their modes of reproduction, the diseases caused by them, susceptibility and immunity. The subject of Primary Pathology will be briefly presented.

In the Laboratory Course the equipment includes culture ovens, sterilizers, and conveniences for making culture media. The practical instruction will include the preparation of culture media, planting and management of cultures, separation of mixed cultures, cultures from carious teeth, and putrescent pulps from practical cases in the Infirmary. Special attention will be given to the study of the bacteria of the oral cavity.

### FIFTH YEAR

Towards the end of the course, so far as may be possible, student groups will be expected to make Bacteriological investigations from their own Infirmary cases.

A course of lectures covering the whole field of diseases of the teeth and their associated tissues will be given to the students of the Fifth Year. This study embraces pathological conditions of the enamel, dentine, pulp, pericementum, cementum, gingivae, and alveolar process. Special consideration will be given to the more important dental lesions, such as caries, alveolar abscesses, granulomata, cysts, rarefying and condensing osteitis, gingivitis and periodontitis. Periodontia is that branch of Dentistry concerned in the prevention and treatment of disease processes occurring in the tissues around the teeth. The whole subject will be covered, includ-

ing a scientific study of the etiology, diagnosis, prognosis, and treatment of these pathological conditions.

The course will be both Didactic and Clinical. In the Infirmary of the College the principles presented by this chair will be demonstrated in the mouth

### CLINICAL DENTISTRY

A competent staff is always in charge of the clinic. Instructors and clinicians are chosen from dentists in practice. This ensures the practical application of laboratory and chair-side instruction.

Before entering the Dental Clinic the student is subjected to a rigid oral examination on all subjects taught by the various departments in the previous years of the course. The instruction given the student by the departments in all five years of the course is applied in actual work for patients in the Clinic under the supervision of a competent corps of instructors.

The College is centrally located, and an abundance of clinical material is constantly available for both regular practice and the many special clinics given by the professors of the various departments.

Honorary clinicians have been appointed from among prominent dental practitioners, who give clinics from time to time during the session. Arrangements are also made with dental practitioners for the students to visit their private dental offices.

*Practical Dental Anatomy*—The Anatomical restoration of lost dental structures is demanded in all operative and prosthetic operations.

*Bacteriology*—The training in the science of bacteriology is put into practice in the Clinic in the diagnosis of morbid conditions of the oral cavity. Students are taught the practical application of bacteriology to the practice of dentistry in all its phases, diagnosis of oral and dental infections, their relation to systemic diseases, sterilization of instruments, and office equipment and cleanliness, both in regard to operator and patient. Bacteriological tests are applied to all root canal operations.

*Pathology*—The science of general, dental and dento-histo-pathology is applied in the Clinic in connection with operative dentistry, each student being required to make a study of special cases presented at the clinics held each week.

*Orthodontia*—A special clinic on Orthodontia is held twice a week throughout the session, when the Fifth Year students are required to treat actual cases in the mouth.

*Periclasia*—Students are instructed in the practical treatment of patients suffering from every phase of this disease. Special attention is given to the proper use of tooth brush, care of mouth and also in the adjusting of the occlusion. This work is carried on under the supervision of specialists in this branch of Dentistry.

*Dental Ceramics*—Instruction is given in the Clinic in the application of dental ceramics. Special attention is given to inlays and jacket crowns.

*Therapeutics*—(Including Electro-Therapeutics)—Demonstrative teaching is given of the value of the well-known therapeutic agents, including electricity, in its special adaptation to the diagnosis and treatment of dental lesions.

*Crown and Bridge Work*—The practical application of crown and bridge work in all its branches is made in the Clinic. In this connection there is a special laboratory, with an instructor in charge.

*Operative*—In the operative clinic the student has splendid opportunity to put into practice the teaching of the Operative Department. Special clinics are given in the different branches of this work.

*Research Work*—Students desiring to undertake research work in connection with Operative practice will find opportunity of doing so. Suggestions and advice on methods of undertaking research problems will be given.

*Dental Economics*—The students are taught to make practical application of the instructions given in this subject. The Clinicians keep constantly in mind the training of the student in the general questions of management of patient and office, and the importance of cleanliness, habit, dental records, appointments, use of assistant, value of the dentist's time, and the general application of the science of economics to dental practice.

*Preventive Dentistry*—The application of the teaching of the Chair of Preventive Dentistry in all its branches is made in the Clinic. Special clinics in oral prophylaxis are given on the subject, and the Fifth Year students are taught to observe and record those factors which influence susceptibility and immunity to dental disease.

*Practical Dental Radiography*—The course in this subject will be taught during the Fifth Year. The X-ray Room adjoins the Clinic, and is equipped with an up-to-date apparatus applicable to a dental office practice. The student will be taught the method of regulating equipment, exposing, developing, fixing, etc., and reading negatives. Special attention will be given to the use of pathologic and other conditions.

Students operating in the Clinic are expected to avail themselves of the X-ray in all cases where its use will enable them to render better service to the patient.

*Prosthetics*—In the Prosthetic Department the student is required to construct for patients a number of separate cases, applying all of the principles taught by the professor of prosthetic dentistry.

Special demonstrations and clinics are given on both full and partial denture prosthesis.

*Metallurgy*—The success of many dental operations depends not only upon the manipulative skill of the operator, but also upon the materials used, consequently, the course in Dental Metallurgy is planned with a view to having the student acquire a thorough knowledge of the preparation, properties, and suitable dental uses of the metals, their alloys, and derivatives.

Most of the materials used for dental restorative purposes, and for mechanical technics, are prepared, tested and analysed as laboratory exercises. The aim of the course is primarily to aid in the selection of dental materials, not from the trade literature alone, but from an accurate knowledge of the known properties.

The laboratory course is given in conjunction with lectures dealing with phases of dental Metallurgy bearing directly upon operative procedure in the Clinic.

*Chemistry*—The properties of many of the dental materials used in the Clinic are studied in the course in Chemistry. A knowledge of Organic Chemistry is essential in physiological problems. Direct practical application in Clinic is made in the analysis of saliva, urine, etc.

### SCHOLARSHIPS

#### THE UNIVERSITY OF TORONTO WAR MEMORIAL SCHOLARSHIP

A Scholarship of the value of two hundred and fifty dollars has been established by the Alumni Federation of the University from the War Memorial Fund to be awarded to a student in the Faculty of Dentistry.

The general basis on which the above scholarship may be awarded is as follows:

- (a) Candidates must have served, or must be near relatives of persons who served, in His Majesty's or Allied Forces during the Great War, 1914-1918.
- (b) Standing in course of studies.
- (c) Need of assistance.
- (d) Such other general qualifications of merit as may commend themselves to the Committee.

Information regarding this scholarship may be obtained from the Secretary-Treasurer of the Alumni Federation, Room 225, Simcoe Hall, to whom applications for the same must be made.

#### THE KHAKI UNIVERSITY AND Y.M.C.A. MEMORIAL SCHOLARSHIP FUND

The Khaki University and Y.M.C.A. Memorial Scholarship Fund was established by the Khaki University Committee. At the present time this fund is being used to make loans to returned-soldier students of the higher years. Applications for such loans should be made to the President of the University.

#### THE S. UBUKATA FUND

The S. Ubukata Fund of \$10,000, the gift of Mr. S. Ubukata, provides for the establishment of prizes, medals, scholarships and loans for which Japanese students of all faculties and colleges may be eligible. Information regarding the conditions of award may be obtained from the Registrar of the University.

REGULATIONS REGARDING LICENSE TO PRACTISE  
DENTISTRY IN ONTARIO

Anyone desirous of practising Dentistry in the Province of Ontario must procure a license from the Board of Directors of the Royal College of Dental Surgeons of Ontario.

*Class A.*—Candidates who have successfully completed the regular course as given in the Faculty of Dentistry, University of Toronto, are granted the License without further examination and without fee.

*Class B.*—Candidates who have obtained advanced standing in and graduated from the Faculty of Dentistry, University of Toronto, are granted the License upon successfully completing the examinations of the years which they attended, and in addition the final examinations of earlier years, exclusive of the First Year. The fee for License is \$10 for the examinations of each year not in attendance at the Faculty of Dentistry.

*Class C.*—Those who have graduated from other approved Dental Colleges are required:

1. To have held before commencing their Dental studies the necessary qualifications to matriculate into the Faculty of Dentistry of the University of Toronto.
2. To be recommended by the Dean of the College from which they graduated.
3. To present credentials as follows:
  - (a) If dental course was commenced previous to September, 1921, present graduation diploma granted upon the basis of a four-year course.
  - (b) If dental course was commenced in September, 1921, or thereafter, to present graduation diploma granted upon the basis of a five-year course (including one pre-dental year taken at a Provincial University).
4. To pass written examinations in the subjects of the Second, Third, Fourth and Fifth Years in the Faculty of Dentistry of the University of Toronto.
5. To satisfy the clinical staff of the Faculty of Dentistry of the University of Toronto as to technic and clinical credits.
6. To sign a covenant to practise ethically and to maintain the dignity and honour of the profession.
7. To pay the required fee.

For further information regarding license to practise Dentistry in the Province of Ontario communicate with the Secretary of the Royal College of Dental Surgeons, Dr. W. E. Willmott, 240 College St., Toronto.

## DOMINION DENTAL COUNCIL OF CANADA

In each of the Provinces of Canada, the Legislatures have enacted laws regulating the practice of Dentistry, and in each Province the Dental Act

provides for a Corporate body, which grants licenses to practise Dentistry in the Province.

In the year 1906 representatives from each of the dental corporate bodies of the nine Provinces of the Dominion met to discuss the feasibility of formulating a curriculum in Dentistry, holding an examination and issuing a certificate of qualification, which would admit the holder, without further examination, to registration in any, or all, of the Provinces entering into the agreement, on payment of the provincial registration fee. All of the Provinces, with the exception of Quebec and British Columbia, have entered into such an agreement and have formed a Dominion Dental Council. The certificate of the Dominion Dental Council will admit the holder to registration, on payment of the local registration fee, in any province in Canada, except Quebec and British Columbia. Provision is made permitting students attending Colleges within agreeing provinces to write the D.D.C. examinations from year to year, as they complete the subjects during the progress of their College course.

A pamphlet containing full information concerning matriculation and examination standards of the Dominion Dental Council will be sent on application to Dr. W. D. Cowan, Secretary, Dominion Dental Council, Regina, Sask.

A Dominion Dental Council certificate will not be accepted for registration in Ontario from any graduate who began the study of Dentistry subsequent to September 1st, 1921, who did not meet the Pre-Dental Standard (Five-year Course).

The fee for registration of Dominion Dental Council Certificate in Ontario is \$50.00.

Dominion Dental Council examinations will be held twice a year, beginning on the Tuesday of the week in which the first of June occurs, and also on the Tuesday in which the twentieth of September occurs.

## GENERAL INFORMATION

## THE LIBRARY

The University Library is contained in a building of its own, situated on the east side of the campus that lies to the south of University College. All students who have paid a library fee to the Bursar of the University are entitled to the privileges of the Library. Besides Reading Rooms the building contains Departmental Studies, which may be used as study-rooms by honour students in the various branches in which the Professors hold seminary courses, and private studies, intended for members of the Faculty or advanced students engaged in research work. The Library is opened at 8.45 every morning and remains open until 10 at night during the academic term. Books in ordinary use may not be taken out of the building during the daytime, but are lent for the night toward 5 p.m., to be returned the following morning before 10 o'clock. Books not in general demand may, on application, be borrowed for a longer period. Failure to return a borrowed book at the proper time and other breaches of the regulations are punishable by fine or suspension from the privileges of the Library.

## ROYAL ONTARIO MUSEUM

## ARCHAEOLOGY, GEOLOGY, MINERALOGY, PALAEOLOGY, ZOOLOGY

Students of the University in all departments are recommended to avail themselves of the privileges of the Museum, which, although under separate control, is intimately connected with the work of the University.

The Museum is open on all week days from 10 a.m. to 5 p.m., Sundays 2 to 5 p.m. The admission is free to the public on Tuesday, Thursday, Saturday and Sunday. On other days an admission fee of fifteen cents is charged.

By a resolution of the Board of Trustees all regular students of the University may be admitted free on all days of the week by presenting their card of registration.

## HART HOUSE

Hart House, the gift of the Massey Foundation, is so called in memory of Mr. Hart Massey. In its widest interpretation it seeks to provide for all the activities in the undergraduate's life apart from the actual work in the lecture room. It affords all the facilities of a first-rate club. In the beauty of its architecture and the various functions which it performs it is unique on this continent.

Hart House contains completely equipped club rooms, including common rooms, reading room, music room, lecture room, sketch room, photographic dark rooms, the Great Hall, which is the students' dining hall, a small Chapel, rooms reserved for religious organizations in the University,



gymnasia, squash courts, swimming pool, running track, rifle range, billiard room, library and Hart House Theatre.

Hart House is open from 8.00 a.m. to 11.15 p.m. daily and meals are served in the Great Hall throughout the academic year. Members are entitled to full privileges of all rooms in the building between these hours and the use of the gymnasia, pool, showers and locker rooms until 6.30 p.m. each day, except Sunday, subject to the regulations of the Athletic Association.

The Library contains a good selection of books of general interest. These books must not be taken from the room.

Sunday Evening Concerts are given by the leading musicians of the city at 9 p.m. in the Great Hall on certain Sundays during the session, and music recitals take place at 5 p.m. every Friday in the Music Room.

The Sketch Room is equipped with facilities for drawing and painting. Weekly drawing and painting classes are given by a qualified instructor and frequent exhibitions of pictures and lectures on Art are arranged.

A group of rooms is set apart for the use of the Faculty Union. A dining room and a common room are also reserved for Graduate Members. Six bed-rooms are available for the use of guests, at a reasonable charge.

The Warden is entrusted with the general supervision of the whole house in co-operation with the following committees. House, Hall, Library, Music, Billiard, Sketch, Camera and Squash. These committees consist of two senior members, a graduate member, the Warden and a full representation of undergraduates. The undergraduates are elected annually by their fellow students. The Board of Stewards is the Senior Committee and has final control of the House, being directly responsible to the Board of Governors. It consists of the Warden (ex-officio chairman) and representatives of the President of the University, the Board of Governors, the Faculty Union, the Athletic Association, the Graduate Members, the Student Christian Association, the Students' Administrative Council and the undergraduate secretaries of all Standing Committees.

Hart House Theatre is an Art Theatre in the University, existing to promote the interests of dramatic art in the widest sense. The theatre is operated by a Board of Syndics, who are responsible to the Governors of the University for its administration. It has always been the policy of the Syndics to encourage the use of the theatre by those recognized dramatic societies within the University which are endeavouring to do serious work. When it is possible to do so, without interfering with the legitimate activities of the Theatre, the Syndics will be glad to allow its use by other student organizations.

All male undergraduates proceeding to a degree in the University are members of Hart House. The annual fee of \$8.00 covers all fees in connection with Hart House and membership in the Athletic Association for the academic year (September to May). Membership Cards may be obtained at the Warden's Office on presentation of the Bursar's receipt for fees paid.

Hart House has no endowment whatsoever, and is entirely dependent for its upkeep on the fees received from graduates and undergraduates and from various sources of revenue in the House itself.

Other male students in the University, or students in the affiliated or federated institutions receiving instruction in the University, may become members of Hart House on payment of the required fee at the Warden's office. Should the students of any of these institutions elect to join Hart House in a body the \$8.00 fee still obtains, but for individual membership the fee is \$10.00.

Graduates are entitled to the full privileges of Hart House on payment of an annual fee of \$10.00. Out-of-town graduates may become members on payment of an annual fee of \$2.50.

## UNIVERSITY RESIDENCES

### RESIDENCE FOR MEN

By the generosity of Mr and Mrs. E. C. Whitney and other friends, the University can now offer to some hundred and fifty men the peculiar advantages of residential life and excellent accommodation within its own grounds. The Residence, opened in November, 1908, consists of three Houses situated on the north side of Hoskin Avenue, opening upon a quadrangle, the fourth side of which is formed by Devonshire Place. They stand about two hundred yards to the north of University College and close to Hart House. The buildings are known as the South, East and North Houses.

Each House contains twenty-four single rooms, one single suite, one double room and eleven suites, a suite comprising a study and two bedrooms. A large room in each building, with an open hearth, has been set aside as a common room. A lavatory with hot and cold shower baths is provided for every eight men. The buildings are heated by steam and lighted by electricity.

The University supplies the table, chairs, book-case, chiffonier, bed, mattress, pillows, linen and window shades for each room; it is prepared to furnish a desk-lamp for a nominal rental.

The rates are \$4.00 per week for a single room or half of a suite, and \$5.00 per week for a single suite. The rental for the Michaelmas Term is payable in advance in one instalment, that for the Easter Term is payable in two instalments—\$50.00 at the opening of the term and the balance on April 1st. Except under very special circumstances occupants vacating during a term will forfeit the rent paid. These charges cover heat, light, house-service, house-laundry, and the use of the telephone. There is no separate dining hall connected with the Residence, but board may be obtained at the adjacent University Dining Hall in Hart House.

Applications for rooms must be made in writing to the Secretary of the Residence Committee (address the Registrar's Office) and must be accom-

panied by a deposit of \$5.00 This deposit will be returned if the application is not granted, but will be forfeited if a room is assigned to the applicant and not taken by him, unless notice of his refusal of the room is received by the Secretary in writing before September 15th. It will be returned in full at the end of the College year if the room key is given back and the room and furniture left in a satisfactory condition. The following principles govern the allotment of rooms (i) No student, who as a result of the annual Spring examinations is not assured of being able to proceed to a subsequent year, will be admitted into the Residence. Exception to this rule will be made in the case of a student in the Faculty of Medicine who has obtained standing at the May examination, but is debarred by the rules of that Faculty from proceeding to the subsequent year until he has passed his Supplemental examinations. Such a student will be assigned a room provisionally, but cannot occupy it unless he passes his Supplemental examinations in September (ii) The rooms in each house will be distributed among the various Faculties and Years. (iii) A limited number of rooms will be reserved for members of the incoming First Year until September 12th. (iv) Applications will be considered in order of priority.

The University lays down three general rules, designed to prevent hazing, the use of intoxicants and gambling The students in each House shall elect a House Committee, which is entrusted by the University with the making and enforcing of any other needed rules and with the maintenance of order. A member of the Faculty resides in each House to act as friend and adviser to the men in residence.

#### RESIDENCE FOR WOMEN

Accommodation for thirty women students is afforded by Argyll House at 100 Queen's Park; the rate for rooms is \$4.00 per week for the 32 weeks of the academic year, payable to the Bursar in advance by the month or term. Applications should be made to the Secretary of the Argyll House Committee, 79 St George Street, Toronto.

#### STUDENTS' ADMINISTRATIVE COUNCIL

The Students' Administrative Council has been entrusted by the Caput with supervision of the conduct of the students, and has power subject to the approval of the Caput, to deal with violations of the regulations governing conduct.

Any student who may be convicted of having taken part in a parade or procession through the city which has not been authorized by the police authorities, after application by the Executive of the Students' Administrative Council, will be severely disciplined.

#### WOMEN STUDENTS' ADMINISTRATIVE COUNCIL

The Women Students' Administrative Council is the representative organ of the women students of the University of Toronto and aims to

coordinate all intercollegiate activities. It consists of representatives from all colleges and faculties. A fee of \$3 is paid for the council by each woman student proceeding to the Degree in Dentistry. The council assumes joint financial responsibility with the men's council for the publication of *Varsity* and *Torontonensis*.

### THE ATHLETIC ASSOCIATION

University athletics for men are under the entire control of the University of Toronto Athletic Association, of which the executive body is the Athletic Directorate. This consists of.

- The President of the University,
- Two members of the faculty, appointed by the President,
- Two graduates, appointed by the Athletic Advisory Board,
- The Medical Director and the Financial Secretary (*ex-officio*),
- Five undergraduates, elected annually,
- An undergraduate representative, appointed by the Executive of the Students' Administrative Council.

The Directorate alone has the power to sanction the use of the name "The University of Toronto" in connection with men's athletics, and no men's athletic event can be held in the University without its approval. It has control of the athletic field, the gymnasium, the swimming pool, and other conveniences in connection with athletics in Hart House, and is empowered by the Board of Governors to make the necessary arrangements to effect the carrying out of the University regulations requiring Physical Training for men.

### WOMEN'S ATHLETIC ASSOCIATION

University athletics for women are under the entire control of the University of Toronto Women's Athletic Association, of which the executive body is the Women's Athletic Directorate. This consists of.

- The President of the University,
- Two women members of the faculty, appointed by the President,
- Two women graduates, elected by the Women's Athletic Advisory Board,
- The Medical Advisor for Women, the Physical Directress, and the Financial Secretary (*ex-officio*),
- Five undergraduates, elected annually.

The Directorate alone has the power to sanction the use of the name "The University of Toronto" in connection with women's athletics, and no woman student may participate in any athletic event during the academic year without its permission. The Medical Advisor for Women and the Physical Directress are authorized to arrange for such Physical Training for women as is required by the University.

## STUDENTS' PARLIAMENT

The undergraduates of the Faculty of Dentistry conduct all student activities through an organization known as the Students' Parliament. The President of the Parliament and the President of each class is elected yearly from the student body, as well as the managers of all athletic teams, and these compose the Cabinet of the Students' Parliament. This organization manages and equips teams for football, hockey, basketball, water polo, and track, and acts in the interests of the whole student body, both in local matters and in connection with the Students' Administrative Council of the University.

The college magazine, *Hya Yaka*, is published monthly by the undergraduates. It affords the students an opportunity for expression in the journalistic field, and a medium for the discussion of athletic, social and literary activities of the student body.

Each day a supply of *The Varsity*, the undergraduate paper of the University of Toronto, is delivered at the Faculty building for distribution among the students.

The Class Fee paid by each student at time of registration is handed over by the College to the official student organizations of the College and University, and these funds are used to carry on student activities.

## CANADIAN OFFICERS' TRAINING CORPS

The Toronto Contingent of the Canadian Officers' Training Corps was organized in 1914. Its primary object is to provide students at Universities with a standardized measure of military training with a view to their qualifying for commissions in the country's auxiliary forces. C.O.T.C. certificates of qualification exempt their holders from examination for commissioned rank on joining a Militia unit in Canada, or, if resident in the British Islands, render them eligible for commissions in the Army Reserve of Officers, the Militia, or the Territorial Army. Holders also obtain certain concessions and privileges on offering themselves as candidates for entry to Woolwich, Sandhurst, and the Air Force College or for first appointments in the Navy, the Naval Medical Service, the Royal Marines and the Army Medical Corps.

The facilities which are offered by the contingent for obtaining a qualification while at the University are intended to enable young gentlemen to give personal service to their country with the least possible interference with their civil careers, to ensure that units have their establishments complete in the junior commissioned ranks, and to build up an adequate reserve of scientifically trained officers who have completed a period of consecutive and systematic military training, on academic lines, of a nature calculated to produce good officers.

The contingent provides the practical work for students taking the Military Studies option for the Arts degree, as also physical exercise for students who may choose this as the form in which they will take their

compulsory Physical Training. In addition to service in the corps for a University credit, students of any year or faculty are trained in it to qualify for officers' certificates in the Infantry, Engineers and Army Medical Corps, writing on the examinations set by the War Office for members of O.T.C. contingents throughout the Empire.

There are at present three companies—in Arts, Medicine and Applied Science respectively—and the training of each is so arranged that on leaving the University students are qualified for commissions in that branch of the Militia to which their University course particularly applied.

The C.O.T.C. is a unit of the non-permanent Active Militia but forms no part of the organization for war and cannot be called out for active service as such. It is a training centre for the educated youth of the country from whom, as from all its sons, the Empire requires hard service, but the hardest from those to whom most has been given.

The present Headquarters are at 184 College Street, and include armouries, members' reading room, library and lecture rooms.

The Contingent's Staff is —

Officer Commanding, COLONEL W. R. LANG, late Gen. Staff, C.E.F.  
Second in Command, MAJOR T. R. LOUDON, late Can. Eng., B.E.F.,  
Adjutant,

Quartermaster, CAPT. W. G. C. KENNEY, late R.A.V.C., B.E.F.  
Paymaster, CAPT. T. A. REED

Contingent Sergeant-Major, S-M. W. HUNT, late Royal Welsh  
Fusiliers.

## SYNOPSIS OF REQUIREMENTS FOR THE PRACTICE OF DENTISTRY IN ONTARIO FROM 1868 TO 1925

1868—The Act Respecting Dentistry passed.

All persons being British subjects by birth or naturalization, who had been constantly engaged for five years and upwards next preceding the passing of this Act, in established office practice of the Profession of Dentistry in the Province of Ontario, were granted the title of Licentiate of Dental Surgery.

All persons being British subjects by birth or naturalization, who were engaged at the time of the passing of this Act, in the Profession of Dentistry, or who, not having been residents in Ontario, had three years' experience in the practice of Dentistry, were required to pass the prescribed examinations.

The Board of Directors was constituted as the Provincial Board of Dental Examiners for Ontario.

1869—Any person commencing the study of Dentistry after the passing of the Act was required to attend one session at a dental college.

Two years' indentureship.

- 1872—Matriculation examination held by members of the Board at Kingston, Toronto, and Hamilton in Orthography, English History and Composition, English Grammar, Geography and Arithmetic.
- 1875—Three years' indentureship
- 1876—Two years at the School of Dentistry of the Royal College of Dental Surgeons  
Two years' indentureship.
- 1878—High School Entrance certificate for matriculation.
- 1880—High School Intermediate certificate for matriculation.
- 1882—Two and one-half years' indentureship.
- 1888—Non-professional Third Class certificate for matriculation.  
Three years' indentureship.
- 1889—Latin compulsory as one of the matriculation subjects.
- 1892—Three sessions at the School of Dentistry of the Royal College of Dental Surgeons.  
Three and one-half years' indentureship.
- 1896—Arts Matriculation. Departmental Junior Matriculation or Second Class Teachers' Certificate including Latin required for the R.C.D.S. matriculation.
- 1903—Four sessions at the School of Dentistry of the Royal College of Dental Surgeons.
- 1908—Compulsory indentureship abolished, except between third and fourth years.
- 1912—Compulsory indentureship entirely abolished.
- 1914 to 1918—The Great War. Number of students in attendance abnormally increased for several years following the war.
- 1917—*Special Sergeants' Course* (February) for purpose of training sergeants for the Canadian Army Dental Corps.  
*Sergeants' Matriculation* Second Class Teachers' Certificate, or eight papers, Junior Matriculation.  
*Regular Session.* Required that all subjects of R.C.D.S. matriculation be completed before enrolment.  
*Enlisted candidates* admitted on Second Class Teachers' Certificate, or eight papers, Junior Matriculation
- 1919—Applications for enrolment in First Year were received from 400 candidates, most of whom were war veterans. Two classes were organized, each accommodating 160, 320 in all. The balance of applicants were permitted to enroll in Pre-Dental Class. Seventeen remained, including partial matriculants. Candidates were also permitted the option of taking Honour Matriculation or First Year Arts in the subjects of English, French, Physics, Chemistry and Biology in lieu of the Pre-Dental Year.  
Twelve months or more of satisfactory service in the Canadian Army Dental Corps entitled candidates to cover subjects of four-year course in three sessions.

1920—Applications for enrolment in First Year were again more than could be accommodated, and it was decided to enroll one Freshman Class only, for which 166 candidates were accepted (Preference for admittance was given to candidates on the following basis.

- 1 Pre-Dental students of previous session
- 2 War service
- 3 Honour Matriculation, First Year Arts or other standing higher than Junior Matriculation
4. Candidates who had made application at previous session and were unable to enter owing to lack of accommodation.
- 5 Dentists' sons and brothers
- 6 Older candidates.)

Seventy-six candidates were registered in the Pre-Dental Year. Notice given that Pre-Dental standard would be compulsory for all students commencing their dental studies September, 1921, or thereafter, who wished to obtain a license to practice Dentistry in Ontario

1921—Pre-Dental standard compulsory for all students, except enlisted candidates who had served one year or more on active front War veterans were admitted to the Freshman Year on Soldiers' Matriculation. Fifty-nine Pre-Dental students registered.

All candidates required to meet R C D S matriculation before commencing Pre-Dental studies

Compulsory Indentureship. Two months' indentureship, or, in lieu of that, one month in College Infirmary, required during summer between Junior and Senior Years.

Notice given that Honour Matriculation standing in the Pre-Dental subjects would be accepted in lieu of the Pre-Dental Year session 1922-23 but not thereafter

1922—All candidates were required to attend the R C D S, or the Arts Department of a Provincial University to obtain Pre-Dental credits. Special concessions to returned soldiers discontinued.

1923—Matriculation: Pass Matriculation (Middle School) in subjects of English, History, Mathematics, Latin, Experimental Science (Physics and Chemistry), and one of Greek, German, French, Italian or Spanish (preferably French).

1925—School of Dentistry became the Faculty of Dentistry of the University of Toronto.

#### DENTAL PRACTITIONERS' COURSE

Members of the Dental Profession are cordially invited to attend the intensive course for Dental Practitioners, to be held in the Dental Building for one week, commencing Monday, September 14th, 1925



The course will be of a practical nature, and the lectures and clinics will be given by members of the Faculty in their respective subjects. The teachers have all had a wide experience in private practice in addition to academic and research work.

A brief outline of some phases of the work to be covered in the various branches of Dentistry follows, with name of teachers in charge, and the number of hours devoted to each subject.

### *Crown and Bridge*

DR. I. H. ANTE. . . . . 7 Hours

This course will cover: causes for loss of teeth, choice of bridge work, reasons for failures, physiological essentials, surgical and technical diagnosis, principles and design for bridges, insertion, maintenance and repair, crowns and pontics, casting, and new double loop wire clasp.

### *Dental Surgery and Anaesthesia*

DR. E. W. PAUL, DR. W. B. AMY, DR. W. L. CHALMERS. . . . . 10 Hours

Lectures on whole subjects of Anaesthesia (local and general) and Dental Surgery will be given, with numerous clinics where actual operations will be performed; also short course in the Anatomy Laboratory on dissection, covering injections in nerve blocking.

### *Full Denture*

DR. J. A. BOTHWELL . . . . . 7 Hours

In Full Denture Prosthesis instruction will be given on impressions, bite taking, setting up teeth and finishing. The course given will be essentially practical, the teacher carrying through to completion a full denture for a patient.

### *Operative Dentistry and Therapeutics*

DR. A. E. WEBSTER . . . . . 6 Hours

The course in this department will cover the general principles of making a diagnosis, treatment and prognosis of dental disease, and the application of these principles to dental practice.

### *Orthodontia*

DR. G. G. HUME. . . . . 4 Hours

The preventive phases of Orthodontia will receive special consideration, along with diagnosis.

### *Partial Denture*

DR. W. E. CUMMER . . . . . 7½ Hours

Following a brief reference to the Science of Partial Denture Service, the methods of Practice, as demonstrated, will include design, construction

(including anatomical articulation, using the combined Snow and Wadsworth apparatus for partials), installation and maintenance and repair.

### *Periodontology*

DR. HAROLD K. BOX . . . . . 9 1/4 Hours

The work will cover the subject of Periodontology, embracing the pathology, etiology, diagnosis and treatment of Periodontal Disease. One afternoon will be devoted to clinics where these principles will be demonstrated in the Dental Infirmary.

### *Preventive Dentistry*

DR. WALLACE SECCOMBE . . . . . 6 Hours.

The problem of susceptibility and immunity to dental disease will be studied with special reference to diet and nutrition. Diet Charts and Food Tables designed to meet the needs of the general dental practitioner, enabling him to make an intelligent study of susceptible cases in office practice, will be presented. Practical phases of oral hygiene will be discussed.

### *Clinical Work*

Should any registrant desire to undertake clinical work, arrangements will be made for supply of patients.

## ACCOMMODATION

Members who prefer not to stay at hotels may secure, at time of registration, accommodation in the Men's University Residences or in suitable private rooming places near the Dental Building, a list of which will be available.

## REGISTRATION

Fee for Course—\$25.00.

Fee to graduates of this University or the School of Dentistry, R.C.D.S. \$10.00.

Dental Teachers registered without fee

Fees payable to The Bursar, University of Toronto, Toronto 5.

Registration Forms will be forwarded upon application to The Dean, Dental Building, 240 College Street, Toronto 2.

## THE TRAINING SCHOOL FOR DENTAL NURSES

A course of training to prepare young women to act as assistants to dental practitioners was established in 1920.

The course embraces eight months' instruction and is divided into two semesters. Successful candidates are awarded a diploma entitling the holder to be known as a Dental Nurse.

Dental Nurses in training are required to wear the official Dental Nurses' uniform, consisting of white gown and cap. Each nurse will require four uniforms, three caps and a laboratory coat. Patterns and instructions may be obtained after acceptance.

The purpose of the Dental Nurses' course is to train young women to act as assistants to dentists.

The subjects of the course include the following:

- Office Routine and Management
- Records, Banking and Correspondence.
- Bookkeeping and Typewriting.
- Operative Assistance
- Dental Anatomy.
- Prosthetic Assistance
- Knowledge and Care of Instruments, Material and Equipment.
- Anaesthetics, Surgical Assistance and First Aid.
- Preparation of Drugs for Dental Use.
- Sterilization and Sanitation.
- Elementary Pathological Technic.
- Elementary Prosthetic Laboratory Technic.
- Radiography.
- Ethics and Legal Status.
- Hospital and Infirmary Routine and Discipline.
- Public Dental Service and Oral Hygiene.
- Hygiene.

#### FEES

Registration Fee . . . . .	\$ 5 00
Tuition Fee, Full Course . . . . .	60 00

Applicants for this course must present certificates of having completed at least two years in a High School.

The Dental Nurses' Course for session 1925-26 will begin on September 14th, and the class will be limited in number. Applicants are required to send written application, with credentials, to the Dean, on or before 10th of August.

Applications are subject to the approval of the Faculty Council and must be made upon the form provided.

All nurses will be registered upon the understanding that they enter upon probation for the first thirty days, and that they will then be permitted to proceed with the course only on the recommendation of the Faculty Council.

Graduation exercises will take place at the conclusion of the course.

#### INSTRUMENTS AND SUPPLIES REQUIRED

Members of the class will be required to furnish themselves with the following instruments and supplies similar to those used by dental students: Rubber bowl for plaster, spatula and knife for plaster, spatula, for wax, Donham flask and spring, inlay ring, scraper and file for vulcanite,

## OUTLINE OF COURSE FOR DENTAL NURSES

## ELECTRO-THERAPEUTICS AND RADIOGRAPHY

Lectures: X-ray physics; principles involved in X-ray machines; nature and source of X-rays, X-ray tubes; danger and precautions; technic of making radiographs, use of screens; types of films; developing, mounting, indexing, Roentgen nomenclature, other office electric appliances and care of same.

Laboratory: practical application of the above principles.

## ANAESTHESIA AND EXODONTIA

The course consists of lectures and practical work

The lectures include Reception, preparation and care of patients requiring the removal of teeth; preparation of dressings and local anaesthetics. Assisting the dentist during the operation. Complete instruction in manipulating one of the various types of Nitrous-Oxide machines, assisting in the administration of the anaesthetic and special instructions in the care of patients who are recovering from the effects of an anaesthetic. Treatment of Hæmorrhage, Syncope, Shock, Hysteria, Suppressed Respiration and Asphyxia. The use of stimulants and artificial respiration.

The practical work comprises the actual experience in assisting the clinicians and students in the surgery where patients undergo operations daily.

## SURGICAL ASSISTANCE

Care of operating room and its equipment.

Methods of sterilization

Making of dressings.

Making of solutions.

Care of linen and methods of removing stains.

Method of disinfecting after a contagious infectious disease.

## FIRST AID

A discussion of surgical and medical emergencies: Burns, scalds, wounds, hæmorrhage, dislocations, fractures, bandaging, syncope, hysteria, intoxication, asphyxia, poisons, etc.

## PROSTHETIC ASSISTANCE

This course will be confined to such phases of Prosthetic Dentistry as relate to the duties of a dental nurse. A brief survey of the Science and Practice of Prosthetic Dentistry will be followed by instruction in selected details in practice, such as the care of the instruments and materials, and in various phases of the construction of prosthetic restorations.

A Laboratory course has been provided in which preparatory exercises, fitting the students for Prosthetic assistance both in the Infirmary and after graduation, will be given.

#### OPERATIVE ASSISTANCE

Dental office sanitation and disinfection.  
Care of instruments and equipment.  
Names, use, and handling of instruments and equipment.  
Scrubbing, cleaning, polishing and sharpening of instruments.  
Arrangement of equipment and instruments.  
Preparation of filling materials for the teeth.  
Preparation of drugs and other supplies for use.  
Methods of assisting at the chair.  
Sterilization and aseptic handling of instruments, dressings and appliances  
Marking of charts and keeping records of dental operations.  
Exclusion of moisture.  
Preparation of patient for operation.

#### ORAL HYGIENE AND PREVENTIVE DENTISTRY

Discussion of the incidence of dental caries, a general understanding of the causes of dental disease and methods of preventing the same. The relation of diet and mastication to mouth health, oral cleanliness, tooth brush, dentifrice and method of brushing teeth, massage of gums and rinsing of mouth, teaching patients how to clean the teeth, social and hospital dental service, industrial dental clinics, and school dental services and other forms of state dental service are discussed with the class during the course.

#### DENTAL ANATOMY

Lectures with practical demonstrations: Names of different teeth; chief functions of dental armament; nomenclature of parts, surfaces, angles, etc.; functions of parts of teeth; outline form of different teeth.

Laboratory course: Study of outlines of the different teeth in the human arch, noting specially the types of teeth and their modifications for purpose of selecting forms that harmonize with other teeth in the arch.

#### BACTERIOLOGY

The instruction consists of a course of about twelve or fifteen lectures and demonstrations, and in addition, such practical work as would be practicable for a Dental Nurse.

The understanding of the general plan of types of infection is given and examples of well-known organisms demonstrated in the cultures and smears. The work further embraces the collection and preservation of pathological material, for example, pus and tissue, the taking of swabs,

making smears and cultures on broth, agar, blood serum, etc. A working knowledge of the care and use of microscopes is also given. Demonstrations are made of the ordinary bacteriological apparatus with instructions in its use.

The theory and practice of asepsis and antiseptics from the bacteriological standpoint, and an explanation of sterilization methods will be given and practised.

The endeavour is to make this course as practical as possible so that the Dental Nurse may afford definite assistance to the Dental Surgeon in performing bacteriological diagnosis during the course of his practice, and also that she may render intelligent assistance in the sterilization and preparation of his instruments and operating room.

#### OFFICE MANAGEMENT AND ECONOMICS

General Routine: Efficient management of office, elimination of waste, making and recording appointments, personal and telephone enquiries, dental and cash records, accounts and collections, office stationery and printed forms, stock cupboard and equipment, principles underlying determination of dental fee, relation of personal characteristics of nurse to success.

Bookkeeping and Banking. Principles of bookkeeping and banking are studied, and practice given in bookkeeping suitable for dental office.

Typewriting: Instruction given in touch typewriting and considerable time devoted to practice.

Correspondence and Filing. Various forms of letters are discussed, as well as methods of filing and follow-up systems.

#### ETHICS AND LEGAL STATUS

The aim of this course of lectures will be to introduce the class to the professional atmosphere, distinguishing between the business office and the professional office. The ethical relations that should exist between the nurse, the patient and the profession will be emphasized. The legal and ethical responsibilities placed upon the dental nurse will also be definitely outlined.

#### HYGIENE

A course of lectures discussing general and personal hygiene, as ventilation, sanitation, heating, lighting, contagious and infectious diseases, clothing, diet, rest, recreation, etc.

#### MATERIA MEDICA AND PHARMACOLOGY

Physical properties, solubilities, and uses in Dentistry of drugs in common use.

Preparation of drugs, varnishes, flavouring waters, solutions, polishing materials, mouth sprays, etc.

The dangers and precautions necessary in handling caustic and poisonous drugs.

#### SUMMARY OF STUDENTS ENROLLED IN THE SCHOOL OF DENTISTRY, SESSION 1924-25

First Year .....	59
Second Year .....	63
Third Year.....	57
Fourth Year.....	83
Fifth Year.....	113
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	375
Dental Nurses' course..	10
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	385

#### COMPULSORY TEXT-BOOKS

##### FIRST YEAR

Chemistry—*General Chemistry*, McPHERSON AND HENDERSON; latest edition: *A Smaller Chemical Analysis*, NEWTH; latest edition.

Comparative Dental Anatomy—DEWEY AND THOMPSON.

Ethics—*Introduction to Ethics*, JOHNSON.

Biology—*Applied Biology*, BIGELOW.

Physics—*General Physics*, FERRY: *Clark's Mathematical Tables*.

(*Official Students' Note-Book—Loose-leaf*).

##### SECOND YEAR

Mineralogy—*Handbook of Mineralogy*, FOYE.

Chemistry—*General Chemistry*, McPHERSON AND HENDERSON; latest edition: *A Smaller Chemical Analysis*, NEWTH; latest edition. *Organic Chemistry*, NORRIS; latest edition.

Practical Anatomy—*Manual of Anatomy*, Vol. III, CUNNINGHAM.

Anatomy—GRAY.

Dental Anatomy—BLACK.

Comparative Dental Anatomy—DEWEY AND THOMPSON.

Prosthetic Dentistry—WILSON.

Operative Dentistry—CLYDE DAVIS.

Histology—BAILEY.

Crown and Bridge—EVANS.

(*Official Students' Note-Book—Loose-leaf*).

## THIRD YEAR

Chemistry—*Organic Chemistry*, NORRIS; latest edition.  
Metallurgy—*Practical Dental Metallurgy*, HODGEN; latest edition.  
Materia Medica and Therapeutics—PRINZ.  
Operative Dentistry—CLYDE DAVIS.  
Crown and Bridge—EVANS.

(*Official Students' Note-Book—Loose-leaf*).

## FOURTH YEAR

Anaesthesia—*Local Anaesthesia*, THOMA.  
Orthodontia—DEWEY.  
Dental Pathology—*Special Dental Pathology*, BLACK.  
Dental Pathology and Periodontia—*Research Bulletins*, Nos. 3, 4, 7,  
HAROLD K. BOX.  
General Pathology—DELAFIELD AND PRUDDEN.  
Bacteriology—JORDAN.  
Preventive Dentistry—*Dental and General Hygiene*, TURNER.  
Jurisprudence—BROTHERS.

(*Official Students' Note-Book—Loose-leaf*).

## FIFTH YEAR

Orthodontia—DEWEY.  
Preventive Dentistry—*Dental and General Hygiene*, TURNER.  
Jurisprudence—BROTHERS.  
Anaesthesia—*Local Anaesthesia*, THOMA.  
Medicine—WHEELER AND JACK.  
Dental Pathology and Periodontia—*Research Bulletins*, Nos. 3, 4, 7,  
HAROLD K. BOX.

(*Official Students' Note-Book—Loose-leaf*).

*Note*—Text-books of earlier years, frequently required in later years of course.

## SUPPLEMENTARY TEXT-BOOKS

Operative Dentistry—JOHNSON; BLACK; MARSHALL.  
Prosthetic Dentistry—*American Text-Book of Prosthetic Dentistry*, latest edition; PROTHERO; GABELL, GOODHUE.  
Crown and Bridge—PEESO; GOSLEE; HOVESTAD.  
Special Dental Pathology—BURCHARD AND INGLIS, ENDELMAN-WAGNER; STILLMAN.  
General Pathology—ADAMI AND MCCRAE; WIDDOWSON; *Report on Odontomes* by GABELL, JAMES, PAYNE.  
Bacteriology—GOADY; BURCHARD.



Therapeutics—GORGAS; BURCHARD; COLEMAN.

Materia Medica, etc.—LONG; PRINZ, *British Pharmacopoeia*; *United States Pharmacopoeia*.

Exodontia—WINTER; LEDERER, CAHN.

Anaesthesia—FISCHER, LEDERER, HEWITT; DEFORD, LUKE; SMITH; NEVIN.

Orthodontia—PULLEN, LISCHER; ANGLE; TALBOT.

Jurisprudence—MIKEL; NOYES, second edition; REHFUSS.

Chemistry—*Modern Inorganic Chemistry*, MELLOR; *Practical Organic and Bio-Chemistry*, PLIMMER, *Physiological Chemistry*, MATTHEWS.

Metallurgy—*Dental Metallurgy*, HEPBURN; *Materials and Machines*, SMITH; *Elements of Metallography*, RUER; *Introduction to Study of Metallurgy*, ROBERTS-AUSTEN; *Alloys and their Industrial Application*, LAW, *Chemical Microscopy*, CHAMOT.

Biology—*Practical Zoology*, PARKER AND PARKER; *Biology*, CALKINS.

Histology—NOYES; HOPWELL-SMITH; BOHM, DAVIDOFF AND HUBER; JORDAN AND FERGUSON.

Dental Economics—*Success in Dental Practice*, JOHNSON; CLAPP.

Comparative Dental Anatomy—UNDERWOOD; TOMES.

Physiology—PEARCE AND MCLEOD; HALIBURTON.

Dental History—GUERINI.

Ethics—SETH; MUIRHEAD.

Preventive Dentistry—PICKERILL, SIM WALLACE; MARSHALL; ADAIR.

Dental Anatomy—DEWEY; BROOMELL; HOPWELL-SMITH; MUMMERY.

Electro-Therapeutics—STURRIDGE, IVY.

Dental Radiography—RAPER; MCCOY; THOMA; *Dental Infections, Oral and Systemic*, PRICE.

Surgery—BLAIR, KINGSLEY; DUKE; *Aids to Surgery*, CUNNING AND JOLL; *Manual of Surgery*, ROSE AND CARLESS, BLAIR AND IVY; BERGER.

Disease of the Gums—GOADBY.

Dictionaries—AMERICAN; STEDMAN; APPLETON; GOULD; LIPPINCOTT, DORLAND, STANDARD DENTAL DICTIONARY, OTTOFY.

Diet—THOMA; MCCOLLUM.

Medicine—OSLER.

Mineralogy—KRAUSS AND HUNT (Publisher, MCGRAW-HILL).

Anatomy—*Atlases*, SOBOTTA-MCMURRICH; SPALTEHOLZ.

Applied Chemistry—*Chemistry of Dental Materials*, C. S. GIBSON.

Bio-Chemistry—*Physiological Chemistry*, MATTHEWS; *Principles of Bio-Chemistry*, ROBERTSON; *Fundamentals of Bio-Chemistry*, PARSONS; *Physiological Chemistry*, PETTIBONE; *Practical Physiological Chemistry*, HAWK; *Practical Physiological Chemistry*, COLE.

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DEPARTMENT OF SOCIAL SERVICE

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## THE DEPARTMENT OF SOCIAL SERVICE

In 1914 the University of Toronto established, in its Department of Social Service, the first university training school in Canada for social workers; and in 1920 it founded the first university chair of Social Science.

The Department, in planning its courses, has in view the following kinds of men and women, assuming a fair degree of maturity and education.

A. Those intending to make social service a life work.

*The Diploma Course* is planned in the belief that a thorough training for any kind of social work must be based on the study both of the whole social organization, and of individual and family problems. It is highly desirable that the student should gain a working knowledge of the leading forms of social service, in whatever form his future work may lie.

B. *Part-time Students.* Every encouragement is given to students who are only able to give part of their time; most of the classes are open to them on consultation with the staff, though field work cannot be provided. Part-time study is found specially valuable for—

1. Those already doing some form of social work, but desiring more knowledge, either in their own or some related subject, or in the general setting of social service
2. Volunteer workers wishing to increase their effectiveness, and understand the problems with which they come in contact.
3. Those desirous of exercising their trusteeship on committees of social agencies, or administrative boards.
4. Those wishing to know more about the problems of the community.

## THE DIPLOMA COURSE

The Diploma Course is covered in two years. Intending applicants are advised to arrange a personal interview with the Director in June or September and as a preparation for this the following guidance as to qualifications is given.

## ADMISSION

*Full-time students* will be admitted on the following qualifications:

1. Graduation from university or college. This, though not essential, is the most desirable preparation for entrance, both from the point of view of the work itself, and for eventual leadership in social service.

Applicants who have during their undergraduate course taken good standing in any of the subjects of the Diploma course may be admitted to more advanced studies.

2. Matriculation is the minimum entrance requirement. The Department is open to consider applications from non-matriculants, but only if their experience has been educationally (not necessarily academically) more than equal to matriculation.

3. Applicants with previous experience of social work will have special consideration, if they show sufficient general training to be able successfully to handle the work, and if their experience has been such as to give reasonable warrant of their fitness for the vocation.

4. Only in special cases will students be admitted over 35 or under 21.

(a) Applicants over the age limit will be admitted only if their social experience and prospects of successful training are satisfactory.

(b) Intending applicants under the limit are urged to spend one or more years in preparatory university work, giving voluntary service in settlements or clubs. The Department will gladly assist, if desired, in the choice of courses, looking to the time when students leaving school intending to train for social work (but unable to give the time required for a degree course), will take two years of selected courses in the University, thus completing with the Diploma a carefully planned 4 years of university education.

5. The full time work of the second year is open to those who have completed the requirements of the first year, or who have taken its equivalent in an accepted institution elsewhere.

6. Intending applicants who wish to take advantage of the interval before entering can be advised as to reading or practice; such preliminary work is always an advantage.

7. Application forms may be obtained from the Secretary, to whom they should be returned as soon as possible. Personal references are required.

8. All full-time students are admitted on probation. Any student who is, in the opinion of the staff, very unlikely to succeed in social work, will be advised to withdraw.

### PROGRAMME OF DIPLOMA COURSE

The two years' work leading to the Diploma includes courses on the fundamentals of social science and on the principles and methods of social work. The subjects are as follows.—

<i>First Year</i>	<i>Second Year</i>
Economics	Social Evolution
Psychology	Psychology
Ethics	Economics
Hygiene and Public Health	Ethics
Community Organization	Social Case Work
Social Case Work	Psychiatry
Child Welfare	Industrial Legislation
	Field Work Conferences

## ELECTIVES

In addition, two of the following are taken in each year:

Recreation and Playground Work (or Boys' Work)  
Problems of Rural Life  
Settlement Work  
Juvenile Court Proceedings.

## FIELD WORK

The development of social work in Toronto is increasing the opportunities for Field Work. At the present time many of the city agencies co-operate with the Department by providing supervised field work for students, while many other agencies and institutions co-operate by providing scope for observation and study.

In the first year the students, in consultation with the Director of Field Work, choose between the two general fields of family case work and community work. The stipulation, however, is made that a prescribed portion of the field work of either the first or second year must be in case work, unless the student has had such experience previous to entering the course. Students whose experience warrants it are given a choice of specialized forms of work in the second year.

Students do field work assignments during the first six months of the course, with two months' intensive work at the end of the first year. In the second year half the time is spent in field work.

## RANKING FOR DIPLOMA CREDITS

*In Written Work* the pass mark is 60% on the total of all papers and 50% on each paper.

First Year students may be conditioned in two subjects if their general average is 60% or over.

Second Year students may be conditioned in two subjects if their general average is 70% or over.

*In Field Work* students are classified A, B, C, and D. In the first year "C" standing, with the indication of better work, will be accepted. In the second year Field Work standing of "B" grade is required.

## COURSES OF INSTRUCTION

## FIRST YEAR

## 1. ECONOMICS.

A course on the elementary principles of economics; value, utility, wealth individual and national, the relation of wealth to welfare, competitive and anti-competitive forces; followed by certain applications to

the problems of the wage-system and its alternatives; trade-unionism, unemployment, women in industry, juvenile labour, conditions of industrial work, and the distribution of wealth and poverty.

PROFESSOR MACIVER

## 2. PSYCHOLOGY.

The meaning, point of view and methods of psychology. Consciousness and the unconscious. The aspects of mental development (a) sensation and association of ideas, (b) habit and instinct, (c) emotion and sentiment. Mental conflict and character.

MISS STRONG

## 3. ETHICS.

The course will deal with the basal conceptions in Ethics, and their application to the problems of personal conduct and social relations. The basis of morals in human nature; the influences of heredity and environment; standards, motives, and sanctions of conduct; moral education; the sphere of morals in community life.

PROFESSOR ROBINSON

## 4. HYGIENE AND PUBLIC HEALTH.

A lecture course dealing with the principles of Public Hygiene, including a discussion of preventable diseases and preventable deaths. The communicable diseases are classified and their modes of infection and methods of control, elucidated. Community control of Tuberculosis, Venereal Diseases and Infant Mortality are emphasized. Industrial Hygiene, Vital Statistics and the activities of governmental and voluntary health promoting agencies are considered.

PROFESSOR FRASER

## 5. COMMUNITY ORGANIZATION.

The nature and development of social forms, associations and institutions, within community. The extension and development of community life. Its focal points: home, school, church, club, union. The organization of industry; of philanthropy. Experiments in social organization, the community centre, the health centre, the "city unit", the garden city, etc.

PROFESSOR DALE

## 6. CASE WORK.

Social Backgrounds. The English Poor Law, the effects of the Industrial Revolution, the Charity Organization movement, modern ideals of case-work, principles and methods, interpretation and diagnosis as the basis of treatment.

MR STAPLEFORD

### 7. CASE WORK METHODS.

Individual and family maladjustments and case-work treatment studied through the medium of case records. This course is closely related to field work and a written study based on field work experience is a requisite for Diploma Credit.

MR. STAPLEFORD

### 8. THE COMMUNITY AND THE CHILD.

The development of principles and methods of child welfare, including the study of legislation. Preventive measures in relation to the normal child, the dependent, defective, delinquent and neglected child. Modern accepted standards in child welfare.

MR. BRYCE

### 9. FIELD WORK CONFERENCE.

Relation of Field Work to lectures. Consideration of current events in social work. Special weekly assignments and related reading. Receiving students' written and verbal reports. Discussions arising out of field work experience.

MISS MCGREGOR

## SECOND YEAR

### 10. SOCIAL EVOLUTION.

Primitive society types and stages. Family, clan, tribe and nation. The evolution of institutions. The various modes of competition and co-operation. Various conceptions of the state and society, with special reference to contemporary discussions and experiments in reconstruction.

The psychological bases of social evolution: the instincts in society, self-realization and repression, personality and community; the individual and his environment, adaptation and maladjustment.

PROFESSOR DALE

### 11. PSYCHOLOGY.

Man in society: the herd instinct—suggestion, sympathy, imitation. Work and fatigue, play and recreation. Adolescence, abnormality, delinquency, and functional mental disorders. Education and re-education.

MISS STRONG

### 12. ECONOMICS.

A course dealing with the Industrial Revolution, tracing the development of modern capitalism, the factory system, associations of capital and of labour, industrial legislation, and explaining in general the social and political reactions of modern industrial changes.

MR. BRADY

**13. ETHICS.**

The ethical development of society, and the relation of the individual to it; nature of social progress and the forces controlling it; the relation of the individual to the state, and the grounds of civic obligation; modern social conditions and problems in their ethical aspects.

PROFESSOR ROBINSON

**14. CASE DISCUSSION SEMINAR.**

The case work method with special reference to child welfare. The study of records illustrating principles and methods of care for dependent, neglected and delinquent children. Child caring institutions and their evolution. In this course a thesis based on field work experience is required of Diploma candidates.

MR. STAPLEFORD

**15. PSYCHIATRY.**

Definitions of fallacious sense perceptions, such as hallucinations, illusions, delusions, etc. Symptoms, cause and treatment of mental diseases. Mental deficiency, epilepsy, heredity. Clinical demonstrations and examinations. History and case taking. Relations of social work to psychiatry.

DR. E. K. CLARKE

**16. INDUSTRIAL LEGISLATION.**

Modern tendencies in the industrial order. State-help and self-help. Canadian movements. The principle of minimum standards, in wages, hours and working conditions. Development of social insurance throughout the world. Unemployment. Industrial casualties. Sickness. Old age. The framing of laws. Their administration.

PROFESSOR MACMILLAN

**ELECTIVE (See page 758)****17. RECREATION AND PLAYGROUND WORK.**

The playground and recreation centre movement, history, organization and administration. The playground supervisor. Community organization and recreation. Mental, moral and physical value of recreation.

Part of the course will be devoted to the practice and teaching of organized games, folk dancing and musical games, suitable for both adults and children.

MISS HODGKINS



## 18. PROBLEMS OF RURAL LIFE.

A course designed to show the important relationship between country and city life. The purpose aimed at is to discuss the symptoms, causes and suggested remedies for rural unrest as evinced in rural migration and other phenomena of country life. The work of various agencies in dealing with country life will be outlined, and a constructive programme for rural community building suggested.

MR. MACLAREN

## 19. SOCIETY AND THE BOY.

A study, based upon an investigation of individual boys, of the effects of our social institutions on boy life. The home, church and Sunday school, public school; social and industrial conditions; recreational facilities. Students taking this as part of a full-time Boys' Work course will be in charge of actual groups or clubs of boys.

(a) The physical, mental, social and religious development of the boy through the various stages of life.

(b) Plans and programmes of work.

MR. WRIGHT

## 20. SETTLEMENTS.

The history of the settlement movement, the nature of the work undertaken by settlements and the results which they accomplish. Plan of organization and the departments which usually develop, e.g., social, educational, religious, medical, etc. Value of club work. Adaptability of settlements to different districts and conditions. Application of their principles to rural and urban centres and to community centres of various kinds.

MRS. PARKER

## 21. JUVENILE COURT PROCEEDINGS.

History of the Juvenile Court and Probation; the personnel of the Court; the departments and how each functions; the procedure in court cases, the meaning of Probation; explanation of Acts 220A and 242A of the Criminal Code; Deserted Wives and Children's Maintenance Act; and certain sections of the Children's Protection Act and the Juvenile Delinquent Act; the law of evidence and court etiquette.

MR. WIDDOWS

## FEES

The tuition fee for the Diploma course is \$45 for each year. This fee is payable as follows; PLEASE NOTE CAREFULLY:

\$40 in advance, to the Bursar of the University, Simcoe Hall.

\$5 in advance, to the Secretary of the Department (this fee is set apart towards the purchase of instructional material.)

The \$40 may be paid by instalments of \$20 payable in October and \$21 payable in January

After October 31st, a penalty of \$1 per month will be imposed until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply. A student will not be admitted to any of the University lectures or laboratories who is in arrears for his fees.

Part-time students pay to the Bursar \$5 for each subject, and to the Secretary of the Department \$2 irrespective of the number of subjects taken.

Supplemental examinations are held in September, and the fee of \$10 is payable in advance to the Bursar

Students must expect some expenditure on books and on car fare in connection with field work

### SCHOLARSHIPS

Three scholarships have been provided by the generosity of friends of the Department, they will be available for the session 1925-1926.

1. *The Alumni Scholarship* of \$100, open to students of good educational background whose work during the Christmas term indicates that they will successfully handle the theoretical and practical work of the Diploma course

Applications for the Scholarship to be made by December 15th to the Secretary of the School.

2. *The Rabbi Brickner Scholarship* The Federation of Jewish Philanthropies has endowed this in honour of Barnett R. Brickner (Rabbi of the Holy Blossom Synagogue, 1920-25) as a fitting tribute to his devotion to the service, not only of his office, but of the whole community. The first award will be made, during the present summer, to a student proceeding to the second year
3. The Sisterhood of the Holy Blossom Synagogue has also made a grant of \$50 from its Scholarship Fund.

### THE LIBRARY

The Library, through the generosity of the McCormick Estate, possesses a good collection of books, reports, periodicals, and bulletins on social subjects. The use of the library and reading room is extended to social workers and other interested readers, on payment of the departmental fee of \$1. The staff welcomes enquiries for information on social matters, and does its best to meet them.

### INFORMATION

For further information address *The Department of Social Service, University of Toronto*. Those who are within reach will find a personal consultation at the office desirable. The office is closed during July, and reopens on August 4



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DEPARTMENT OF PUBLIC HEALTH NURSING

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## THE DEPARTMENT OF PUBLIC HEALTH NURSING

This Department began its work in September 1920, and is a school in which graduate nurses may obtain training for public health nursing. We are thus helping to prepare a new occupational group called into existence by the emphasis now being put upon organized health work in all civilized countries.

Extensive public health programmes are being formulated in every Province of the Dominion of Canada, programmes set forth by many agencies both state and voluntary, but all alike in that they include work which is to be carried on by nurses. It is, therefore, imperative that facilities for the training of such nurses should be provided in this country. In Canada it has been assumed that the usual three years hospital training is a pre-requisite for a public health nurse, but, at the same time, it is realized that that hospital training alone cannot equip the nurse for this task. She must add to it some specific training for this highly specialized branch of work. Of necessity, the pioneers have had to train in the slow school of experience, for there was no other training available, but that is too expensive and wasteful a method to be prolonged unduly, and it is no longer necessary as the University now offers this year of special training to graduate nurses who wish to prepare for the public health field.

The public health nurse, in conjunction with the public health doctor, is directing her energies to the teaching of health and the prevention of disease. Both nurse and doctor are being trained to work back from sickness and physical defect to a study of their causes and thence to a study of the means of prevention, in order that they may teach, and may apply in the community, those means of prevention. The nurse is usually the connecting link between the public health administrator and the people whom he would reach with his health teaching and health legislation. Her work lies in the home, the school, the factory and the clinic.

The establishment of the Department of Public Health Nursing in the University was made possible in 1920 through the generous assistance of the Ontario Branch of the Canadian Red Cross Society, which organization undertook to meet the expenses of the new Department for a period of three years. In 1923, full responsibility for the Department was assumed by the University.

## OPPORTUNITIES FOR THE NURSE IN PUBLIC HEALTH WORK

The developments in this work during the last few years have been so remarkable that we would emphasize the opportunities which it offers. There is an increasing demand for the nurse who, usually as a member of the local Health Officer's staff, will carry on various forms of health work. Infant hygiene and school nursing are usually the two first services to demand attention starting with those, other specialities are added to the public health nurse's work, the scope of which varies considerably in different localities

There are also many teaching and executive positions open to nurses but these positions all demand a very highly qualified woman. General education, technical training and personality are all of such importance that there are as yet few women prepared to meet the demands of this ever widening field. This is a piece of work which offers unbounded opportunities for interesting and valuable service, and the University course has much to offer to the student who wishes to prepare for it.

## ENTRANCE REQUIREMENTS

1. Applications for admission will be considered from the following classes of students:

- (a) The student who has obtained complete credit for Pass Matriculation.
- (b) The student who submits certificates other than those of Ontario which have been recognized by the University as equivalent in value to Pass Matriculation.
- (c) The student of mature age who has not complete Pass Matriculation or its equivalent. Such a student must submit with her application official statements with reference to her secondary and professional education.

2. In addition, all applicants must present evidence of certain professional training in nursing as follows: nurses from countries or states where registration is available must be eligible for registration; nurses from countries or states where registration is not available must submit a record of their hospital training for special consideration.

3. Students must be not more than 35 years of age when entering the Department.

4. Exceptions to the above rulings may be made in favour of nurses who have been engaged in public health nursing for two years or more.

5. Preference will be given to applicants who have the broadest preliminary education and to early applicants. Only fifty students can be accepted in this class.

## PART TIME STUDENTS

Nurses wishing to take the full course over a prolonged period may, under certain conditions, register for selected lecture courses in one year, and complete the work in a second year.

Nurses may register as occasional students for any one or more of the lecture courses in the regular curriculum if the class be not already overcrowded. If such occasional students meet the entrance standard of the Department, credit will be allowed for the work that they cover.

## GENERAL INFORMATION

Application forms may be obtained by writing to the Secretary, the Department of Public Health Nursing, University of Toronto.

Nurses desiring admission to the training course, but uncertain as to their eligibility, should write personally to the Department for further information, addressing the Secretary. If possible a personal interview will be arranged. The Office of the Department at No. 1 Queen's Park, is open during the summer months.

Applicants should understand that this course demands their full time for the whole of the academic year, and that it is quite impossible to take the full course and do any other professional work at the same time.

It is a difficult matter to arrange this course to include all that is desirable in such a short time. The University and the City of Toronto have so much to offer to the keen student that she will have to choose wisely in order to keep her work within reasonable bounds. The Director will have special office hours for consultation with the students in order that all may have help and advice when they need it.

Applicants are also warned that the demands of this course are such that only those in good physical health can do the work. In addition, it should be understood that the future work of a public health nurse is likely to be of an arduous nature, and that a nurse who is not in good condition physically cannot hope to meet the requirements of this field.

## STUDENTS WITH PREVIOUS PUBLIC HEALTH EXPERIENCE

It appears that nurses who have already been engaged in public health work are now seeking the special training which was not available in the past. If such students enter the Department, special care will be taken in planning their practical work. No student will be required to do field work which she has already covered under satisfactory conditions. She will receive credit for that, and as far as time and opportunity allow, specially selected work will be arranged to take its place.

This information applies to nurses who have been working with a Visiting Nurse Association.



## FEES

The tuition fee for the regular full time course is \$80 if paid in October. After October a penalty of \$1.00 a month will be imposed until the whole amount is paid.

A fee of \$1.00 must be paid by all students for the use of the Department Library.

The fees for part time students will be:

For a course in any one subject for the Session.. . . . .	\$5.00
For a one term course (15 hours) .....	\$3.00

## EXPENSES

There is no University residence for the students of this Department. Board and lodging may be obtained in the vicinity of the College buildings from \$10 00 per week upwards.

The students must be prepared to meet a small expenditure for carfare while doing practical work.

Text books may be bought at the University Book Room. Copies of all prescribed text books will be kept in the University Library.

## SCHOLARSHIPS

A number of scholarships are available for the students in this Department during the year 1925-1926.

The Ontario Red Cross is offering one scholarship of \$350.00. Nurses interested in that offer should write to the office of that Society, 410 Sherbourne Street, Toronto.

The Victorian Order of Nurses is offering a small number of scholarships of \$400.00 each. These are only open to nurses undertaking to work with the Order after completing the course. For further information applicants should write to the Chief Superintendent, Victorian Order of Nurses, Jackson Building, Ottawa.

A few Nurses' Alumnae Associations have also offered scholarships open to their own members.

## DIPLOMA AND EXAMINATIONS

A Diploma will be granted to all students who have completed the required work of the Department. Each student will be required (1) to do satisfactory class work throughout the year, (2) to receive a satisfactory report upon her practical work, and (3) to make the required pass mark upon the final examinations of the Department.

Supplemental examinations in the work of this Department will be held in September if necessary.

## BUILDINGS

The offices of the Department are located in the building occupied by the Department of Medicine at No. 1 Queen's Park.

## LIBRARY

The general Library of the University is contained in a separate building situated on the East side of the campus.

The Department of Social Service has, in its own building, a valuable branch library, the use of which has been extended to the Public Health Nursing students.

For the convenience of the students certain of the prescribed text books, magazines, and pamphlets belonging to the Department of Public Health Nursing are housed in the reading rooms of the Department of Social Service.

The Public Library of Toronto is situated at the corner of St. George and College Sts., about three minutes walk from the University buildings. Any student may have the free use of its books; it is only necessary to have a card of recommendation signed by a Toronto householder.

## PHYSICAL TRAINING

Classes in physical training for the women students of the University are given at the Household Science Building. These include gymnasium and swimming instruction. The students of the Department of Public Health Nursing are admitted to those classes upon payment of the usual fee of four dollars.

### EXTENSION COURSES

I. It is expected that a short Extension Course, two to three weeks in length, will be arranged annually for nurses with previous experience or training in public health work. Only a small registration fee is required for admission to that course and no special entrance standard beyond the professional qualifications stated above. No certificates are awarded.

The content of the Extension Courses will vary according to the demands of the applicants. It is hoped in this way to provide pioneer workers and early graduates of this Department with an opportunity for keeping their work up to date.

II. It is possible during the College year to arrange a course of weekly lectures upon some one subject of interest to the public health nurse, if the demand for any special subject be sufficiently strong.

Inquiries about these courses may be addressed to the Secretary of the Department of Public Health Nursing, University of Toronto, or to the Department of University Extension.

PUPIL NURSES: EXTENSION COURSE IN PUBLIC HEALTH  
NURSING

During the session 1924-25 a short piece of teaching in public health nursing has been arranged for the senior pupil nurses of the Toronto hospitals,\* the plan being to have each senior pupil receive one month of this teaching. This work is under the joint control of this teaching Department and the Department of University Extension. It is in the latter Department that these students must register, as, not being graduate nurses, they are not eligible for registration in the Department of Public Health Nursing.

The objects of this work are as follows:

1. To give each pupil a vivid picture of the fact of public health work, in order that she may realize that every nurse has opportunity and responsibility for certain preventive work.
2. To improve the hospital work of the pupil nurse by the better understanding she will have after working with patients in their own homes.
3. Vocational guidance for the pupil nurse.

The content of the teaching:

1. An explanation of the present activity in the field of preventive medicine, and particularly the nurse's share in that work, *i.e.*: public health nursing.
2. Daily practical work with public health nurses.

The schedule:

These students meet for class room teaching one hour every day for the first ten days, and after that approximately every other day. Apart from the hour in the class room, the day is spent with public health nurses at their work.

The class room teaching is made up of introductory and explanatory lectures upon the work that is being done, and conferences upon the work as the pupil experiences it.

So far the practical work has all been done with the Municipal Department of Public Health of Toronto. Other Public Health groups may help with this teaching next year.

If Nurses' Training Schools elsewhere in the Province are interested in obtaining this work for their pupils they should seek information from either this Department, or the Department of University Extension.

\*Also one student has been sent from a school outside of Toronto.

## CURRICULUM FOR THE DIPLOMA OF PUBLIC HEALTH NURSING

The Department offers to its students a general training course in Public Health Nursing, its theory and practice. It is hoped thus to prepare nurses to serve effectively in any public health organization.

The work of the student is divided into two parts: (1) Theoretical—consisting of lecture courses and class work, and (2) Practical work, which in such courses is commonly called field work.

Students will be expected to complete satisfactorily the required term work of the course before being allowed to write the final examination.

### LECTURE AND LABORATORY COURSES

These courses fall into two groups:

I. Major subjects which are required of all students.

II. Short courses. The selection from this group must be made in conference with the Director. The decision will be based upon the work covered previously in the hospital training school. At least three of these subjects must be included in each student's programme.

#### I.

1. Public Health Nursing ... .. Miss EMORY, assisted by  
Miss RUSSELL and SPECIAL LECTURERS

This course consists of lectures, excursions, conferences and seminar discussions. Didactic instruction includes an historical introduction to public health nursing and a study of principles, organization, administration and supervision of that work. Special problems, records and reports are given consideration. Methods and technique of six of the special branches of this work, namely, Prenatal and Infant Hygiene, Tuberculosis, Venereal Disease, Industrial Nursing and Hospital Social Service are dealt with by special lecturers, the lecturer in each case being a nurse who has specialized in the work of that particular field.

2. Preventive Medicine and Hygiene (including Sanitary Engineering).

a. Lecture Course . . . . .	{	PROF. DONALD T FRASER DR. R. R. MCCLENAHAN
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Aims of Preventive Medicine, brief historical review of the development of the subject to the present time.

Preventable diseases and preventable deaths; volume and kind of present mortality and morbidity. Classification of communicable diseases. Incidence, etiology, epidemiology, modes of transmission and methods of control of communicable diseases. Methods of dealing with special public health problems, such as maternal and infant mortality, tuberculosis, venereal diseases, etc., problem of the degenerative diseases and cancer. Industrial hygiene, occupational diseases, workman's compensation. Public health centres and clinics. Vital statistics, public health education and publicity. Public health organization and administration. Sanitary engineering problems, community and home sanitation.

3. Laboratory Course, Elementary Bacteriology Miss M. MAITLAND

3. Psychology... .. DR. W. E. BLATZ

Series of lectures and demonstrations extended throughout the year for one hour per week. this course is intended, not only to introduce the students to the field of Psychology, but also to discuss some of the applications of modern psychological methods to their vocations such topics as the following will be discussed: original capabilities, learning process; human motivation, social influences; abnormal tendencies; intelligence testing, mental deficiency, etc.

4. Methods in Health Teaching ... .. Miss RUSSELL

In connection with this course each student is required to teach a series of lessons on Health to the children of the elementary schools of Toronto. The supervision of this teaching is arranged by the Toronto Board of Education.

5. Social Work—Principles and Practice..... MR. F. N. STAPLEFORD

A brief survey of social disabilities, and the modern methods adopted for their prevention and treatment, with a study of the principles governing these methods. The case method of dealing with problems of social disability. Various types of social agency; the co-ordination of these agencies.

6. Nutrition and Dietetics... .. Miss A. L. LAIRD

The course includes a discussion of the essentials of an adequate diet, the nutritive values of common food stuffs, food costs as compared with food values, the planning of dietary budgets with special reference to economic and social conditions, the feeding of school children.

7. Infant Hygiene. . . . . DR. ALAN BROWN  
 8. School Hygiene. . . . . { MISS EMORY  
   DR. J. T. PHAIR

This course includes a study of the relation of school hygiene to public health work and to the school system. Consideration will be given to personnel, activities and administration of school health work with special reference to the function of the school nurse. Health work in rural schools including special problems and their health application will be emphasized.

## II.

1. Medicine: a review course consisting of lectures and clinics at the Out-patients' Departments of the general hospitals and of the Hospital for Sick Children.

- a. Venereal Diseases . . . . . DR. GORDON BATES  
 b. Tuberculosis and other Chest Diseases. . . . . DR. J. H. ELLIOTT  
 c. Communicable Diseases. In this case the }  
    teaching will be given in connection } DR. BEVERLEY HANNAH  
    with bedside clinics. . . . . }

2. Oral Hygiene. . . . . DR. WALLACE SECCOMBE

A short lecture course, illustrated with charts and lantern, covering the more important dental problems as they affect the nurse. The subject is approached particularly from the preventive side, and includes development and dietetic influences, proper use and care of the teeth, mastication and toilet of the mouth. The diseases of the teeth and surrounding tissues, and the relation of these to general health, are discussed, along with simple remedies for the relief of pain.

3. Mental Hygiene . . . . . DR. EPIC CLARKE

The course covers Mental Hygiene procedure in the community, in the schools, and in hospital treatment; the history of mental disorders and the nature of mental disease and defect, the various types of which are dealt with, showing the course, symptoms, diagnosis and treatment. Lantern lectures are included in the series. Clinical work is arranged at the psychiatric clinic of the Toronto General Hospital.

4. Social Economics. . . . . PROFESSOR MACIVER

This course will consist of an introduction to some practical economic problems bearing directly upon social welfare such as, changes in the cost of living and in standards of life; labour organization; methods of arbitration and conciliation, unemployment and its remedies, social insurance against unemployment, sickness, invalidity and accident; workmen's compensation; the minimum wage.

## PRACTICAL WORK

### 1. The practical work will be arranged as follows:

(a) One month's work starting September 1st. No student may enter upon the lecture work of the year unless at least one month of practical work has been covered. Students may receive credit for previous experience in public health nursing (i.e. with a Health Department or a Visiting Nurse Association), if it satisfy our requirements. In that case the practical work in September will not be required.

(b) Two months' work between the middle of April and the middle of June.

(c) The year's study will necessarily include some participation in the practice of public health nursing during the whole lecture period, but no routine district work will be carried by the student during that lecture period, i.e. from October to March.

### 2. The above periods of practical work may be arranged with the following Toronto organizations and workers:

The Department of Public Health.

The Victorian Order of Nurses.

The Social Service Department of the Toronto General Hospital.

The Neighbourhood Workers Association (an Association doing family welfare work).

The National Tuberculosis Association (at the Gage Institute).

Industrial nurses.

3. Some rural and small town practical training has become available. So far such opportunities have been very limited, but they will probably be more extensive in the future. Such experience may be open to the student who is prepared for a small amount of extra expense for travelling and living while out of town. Every effort is made to reduce this expense to a minimum. When the student can be placed with a county nurse working on the outskirts of Toronto, this extra cost will be obviated.

### 4. Weekly conferences are held in connection with this work.

5. Written studies of the more extensive pieces of public health work in which the student engages must be submitted. These reports form one of the final tests for the Diploma.



6. Students are asked to give very careful consideration to the following information concerning practical work

(a) The Department is dependent upon the courtesy of these health organizations for this work for its students, therefore any rules made by the organizations must be observed without questioning.

(b) Difficulties of arrangement in such work may make slightly unusual demands upon the time of the student.

(c) No street uniform is worn by the students, but certain dress regulations have been imposed by the organizations providing field work, and must be observed by the student *while doing field work*

(i) A tailored cloth suit or long coat must be worn, and with that a wash blouse or wash dress

(ii) For the work with the Victorian Order of Nurses it will be necessary for each student to provide herself with a full-length apron to be worn while in the sick room. A linen laboratory coat is very suitable for this purpose.

(iii) *No fur coats, fur-trimmed coats, or fur collars may be worn.*

(d) Boston bags are provided for the use of students while on duty.

(e) No exceptions can be made to the rules, and all students entering the Department must be prepared to observe both the letter and the spirit thereof

7. Students will be required to cover the full period of practical work. If, for any reason, the work is interrupted, the period will be prolonged to cover the number of days lost.

8. No student will be required to repeat practical work which she has already covered under satisfactory conditions. She will receive credit for that, and, as far as time and opportunity allow, special work will be arranged.

## TEXT BOOKS

The following is a partial list of the text books recommended for the use of the students in this Department.

- Book of Home Nursing—Campbell.
- Care and Feeding of Children—Holt.
- Chemistry of Food and Nutrition—Sherman.
- Children Astray—Drucker and Hexter.
- Dietetics for Nurses—Proudfit.
- Economics for the General Reader—Clay.
- Essentials of Medicine—Emerson.
- Essentials of Psychology—Pillsbury.
- Evolution of Public Health Nursing—Brainard.
- Evolution and Significance of the Modern Public Health Campaign—  
Winslow.
- Feeding the Family—Rose.
- Food Products—Sherman.
- Handbook for School Nurses—Kelly and Bradshaw.
- Health Education—Wood.
- Health Education in Rural Schools—Andress.
- Health Work in the Schools—Hoag and Terman.
- Healthy Child from Two to Seven—McCarthy.
- History of Nursing—Nutting and Dock.
- Home and Community Hygiene—Broadhurst.
- Industrial Nursing—Wright.
- Life of Florence Nightingale—Cook.
- Mental Conflicts and Misconduct—Healy.
- Mental Diseases—Gulick.
- Mental Hygiene and the Public Health Nurse—Macdonald.
- Normal Child—Brown.
- Nursing in Diseases of Children—Leo-Wolf.
- Obstetrical Nursing—Von Blarcom.
- Organization of Public Health Nursing—Brainard.
- Outline of the Practice of Preventive Medicine—Newman.
- Personal Hygiene Applied—Williams.
- Personal Hygiene for Nurses—Bunker and Turner.
- Practice of Preventive Medicine—FitzGerald.

- Preventive Medicine and Hygiene—Rosenau.  
Principles and Practice of Nursing—Harmer.  
Primer of Hygiene—Browne and Nasmith.  
Primer of Physiology—Browne and Nasmith.  
Prospective Mother—Slemons.  
Psychology for Students of Education—Gates.  
Public Health Nursing—Gardner.  
Sanitation for Public Health Nurses—Hill.  
Short History of Nursing—Dock and Stewart.  
Social Work—Cabot  
Social Work—Devine.  
Social Work in Hospitals—Cannon.  
Syphilis and the Public Health—Vedder.  
Talks to Teachers on Psychology and Life's Ideals—James.  
Textbook of Simple Nursing Procedure for High Schools—Pope.  
What is Social Case Work—Richmond.

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CURRICULUM IN LAW

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# DEGREE OF BACHELOR OF LAWS

## NEW COURSE

The following curriculum for the degree of Bachelor of Laws will come into force with the opening of the session 1925-1926, and all candidates entering upon the course for the degree after July 1st, 1925, must follow this curriculum, the former curriculum, which appears on page 5 will remain in force until June 30th, 1929, in order that candidates who have already obtained standing under this curriculum may complete the course for the degree.

## ENTRANCE

A candidate for the degree of Bachelor of Laws (LL B.) must submit proof either (a) of having completed at least the First and Second years in the Faculty of Arts of this or a British or Canadian University or (b) of having been called to the Bar by the Law Society of Upper Canada.

Any person who has been admitted as a student-at-law by the Law Society of Upper Canada and who is a candidate for the Second Year examination as required by the Law Society may enter at the First Year

The Senate may consider the application of any person who cannot comply with these conditions.

## FIRST YEAR

### SUBJECTS IN THE FACULTY OF ARTS

1. ENGLISH CONSTITUTIONAL HISTORY, from 1603: honour examination of the Third Year, (History 3e, pp 106, 107).

2. ENGLISH CONSTITUTIONAL LAW honour examination of the Third Year, (Law 3c, p 115)

3. COLONIAL CONSTITUTIONAL LAW. honour examination of the Third Year, (Law 3d, p 115).

4. HISTORY OF ENGLISH LAW: honour examination of the Third Year, (Law 3e, pp. 114, 115)

5. ROMAN LAW: honour examination of the Third Year; (Law 3b, p 115).

6. JURISPRUDENCE: honour examination of the Fourth Year, (Law 4c, p. 116)

7. INTERNATIONAL LAW: honour examination of the Fourth Year, (Law 4d, p. 116).

8. CANADIAN CONSTITUTIONAL HISTORY: honour examination of the Fourth Year, (History 4f, p. 108).

9 CANADIAN CONSTITUTIONAL LAW and FEDERAL INSTITUTIONS. honour examination of the Fourth Year; (Law 4a, 4b, pp. 115, 116).

The references are to the Calendar of the Faculty of Arts for the session 1925-1926.

A candidate may not present himself for the examination of the Second Year before he has completed the examination of the First Year.

## SECOND YEAR

### A. COMMON LAW

1. CRIMINAL LAW. . . . . Kenny or Stephen, Kenny's Cases.
2. REAL PROPERTY. . . . . Armour; Tudor's Cases.
- 3.\*HISTORY OF REAL PROPERTY LAW Digby.
4. CONTRACTS . . . . . Anson; Kenny's Cases.
5. TORTS, . . . . . Salmond; Pollock, Kenny's Cases.
6. EQUITY. . . . . Maitland; Smith.
- 7 PERSONAL PROPERTY.. . . . Williams.

### B. CIVIL LAW

- 8.\*ROMAN LAW OF *Obligaciones* . . . { Justinian; Gaius; Mackintosh's  
Roman Law of Sale, and subjects  
treated in the Course during the  
session 1925-1926.

## THIRD YEAR

- 1.\*MEDICAL JURISPRUDENCE. . . . . Reese.

### A. COMMON LAW

2. COMMERCIAL LAW..... { Falconbridge, Sale, and Book II  
Banking.
3. CONFLICT OF LAWS . . . . . Dicey or Westlake.
- 4 COMPANIES . . . . . { Masten and Fraser; Robson and  
Hugg's Cases.
5. STATUTES . . . . . Craies' Hardcastle.
6. EVIDENCE. . . . . Stephen.
- 7.\*DOMESTIC RELATIONS..... Eversley, Parts 1, 2 and 3.

### B. CIVIL LAW

8. \*COMPARATIVE COMMON AND CIVIL  
LAW . . . . . { Walton: Scope and Interpretation  
of the Civil Code.  
Portions of the Civil Code of Lower  
Canada, as from time to time pre-  
scribed; and the principles of the  
corresponding Common Law.

\*See first paragraph under heading of "Examinations" on page 5.

## C. THESIS

Each candidate for the degree of LL.B must present a thesis satisfactory to the examiners in Law, upon some subject embraced in the curriculum, on or before the 31st March in the year in which he presents himself for examination in his Fourth Year in Law, or on or before the said date in any subsequent year. The subject of the thesis will be prescribed by the Senate, and will be announced at least eight months before the date upon which it is due. An oral examination on the subject of the thesis may be required at the option of the examiners in Law. Candidates for the degree may defer presenting the thesis until a subsequent annual examination, in which case the fee for examination shall be \$10.

## EXAMINATIONS

Candidates must pass the examination set by the University in each subject marked with an asterisk; the University will grant credit in the subjects not so marked on the presentation of a certificate from the Law Society of Upper Canada showing that the candidate has passed the required examinations at the Osgoode Hall Law School.

The annual examinations shall be held in June.

A barrister may present himself for the subjects of examination of the Second and Third Years at the same annual examination

## DEGREE OF BACHELOR OF LAWS

## OLD COURSE

The following curriculum for the degree of Bachelor of Laws will remain in force until June 30th, 1929, in order that candidates who have obtained standing under this curriculum may complete the course for the degree.

Candidates for the degree of LL B must have:

- (a) produced satisfactory certificates of conduct;
- (b) matriculated in the Faculty of Law;
- (c) passed the prescribed examinations;
- (d) attained the age of twenty-one years.

Any person having the degree of Bachelor of Arts or of Master of Arts in the University of Toronto; or any person having the degree of Bachelor of Arts or of Master of Arts of an approved University; or any person who has been admitted to the Bar by the Law Society of Upper Canada, may enter the Department of Law at the Third Year of the course of study in that Department; but prior to presenting himself for the final examination in the course of the degree of LL.B. he shall pass in addition to the examinations of the Third and Fourth Years in the Department of Law, the following examinations in the Faculty of Arts, viz.:—

1. ENGLISH CONSTITUTIONAL HISTORY: Honour examinations of the Second and Third Years. (History, 2f, p. 105; 3e, pp. 106, 107.)

2. ENGLISH CONSTITUTIONAL LAW: Honour examination of the Third Year. (Law 3c, p. 115.)

3. COLONIAL CONSTITUTIONAL LAW: Honour examination of the Third Year. (Law, 3d, p. 115.)

4. ROMAN LAW: Honour examination of the Third Year. (Law 3b, p. 115.)

5. HISTORY OF ENGLISH LAW: Honour examination of the Third Year. (Law 3a, pp 114, 115 )

6. POLITICAL ECONOMY: Honour examination of the Second Year. (Political Economy, 2a, 2b, pp. 110, 111 )

7. JURISPRUDENCE: Honour examination of the Fourth Year. (Law, 4c, p. 116 )

8. INTERNATIONAL LAW: Honour examination of the Fourth Year. (Law, 4d, p. 116.)

9. CANADIAN CONSTITUTIONAL HISTORY: Honour examination of the Fourth Year. (History, 4f, p. 108.)

10. CANADIAN CONSTITUTIONAL LAW and FEDERAL INSTITUTIONS: Honour examination of the Fourth Year (Law, 4a, 4b, pp 115, 116 )

The references in Nos. 1-10 are to the Calendar of the Faculty of Arts, 1925-1926

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Any person who has been admitted as a student-at-law by the Law Society of Upper Canada and who is a candidate for the Second Year Examination as required by the Law Society may enter the Department of Law at the Third Year, but the results of his examination of the Third Year will be withheld pending the announcement by the Law Society of the results of the Second Year Examination. Such a candidate may present himself for examination in the prescribed Arts subjects during the Third and Fourth Years of the Law course.

Undergraduates in the Faculty of Arts, who intend to proceed to the degree of LL.B., may take these examinations either during their Arts course or during the Third and Fourth Years of their Law course.

#### MATRICULATION

The Matriculation examination in the Faculty of Law shall be identical with the examination of the First Year in the Undergraduate Pass Course: English; Latin; one of Greek, French, German, Hebrew, Italian or Spanish; a second optional language or Science, Algebra and Geometry; Ancient History or Trigonometry or Religious Knowledge.



## FIRST YEAR

The subjects of examination in the First Year in the Faculty of Law are as follows:—

(a) Subjects of the Pass Course in the Faculty of Arts in which Pass standing will be required.—

1. English of the Third Year.

2, 3. Any two of the following subjects of the Second Year, viz.:—Latin, Greek, French, German, Hebrew, Physics, Zoology, Botany, Chemistry, Geology of which one must be a language.

4. History of the Second Year.

5. Ethics of the Third Year.

6. History of Philosophy of the Third Year.

(b) Subjects of the Political Science Course, in which Honour standing will be required:—

1. English Constitutional History of the Second and Third Years.

2. English and Colonial Constitutional Law of the Third Year.

3. Political Economy of the Third Year.

4. History of English Law of the Third Year.

5. Roman Law of the Third Year.

## SECOND YEAR

The subjects of examination in the Second Year in the Faculty of Law shall be as follows, viz.:—

(a) Subjects of the Pass Course in the Faculty of Arts in which Pass standing will be required.—

1. English of the Fourth Year.

2, 3. Any two of the following languages of the Third Year:—Latin, Greek, French, German, Hebrew.

(b) Subjects of the Political Science Course, in which Honour standing will be required:—

1. Modern History of the Third Year.

2. Canadian Constitutional History of the Fourth Year.

3. Public Finance of the Fourth Year.

4. Political Philosophy of the Fourth Year.

5. Jurisprudence of the Fourth Year.

6. Public International Law of the Fourth Year.

7. Federal Constitutional Law of the Fourth Year.

## THIRD YEAR

1. Common Law..... Broom's Common Law. .

2. Personal Property..... Williams.

3. History of the Law of Real  
Property..... Digby.

4. Contracts..... Anson.

- |  |  |
|--|--|
| 5. Law of Torts... ..                  | { Salmond, English ed.<br>Pollock  |
| 6. Equity... ..                        | { Maitland's Lectures on Equity.<br>Smith's Principles of Equity.                                    |
| 7. Roman Law of <i>Obligaciones</i> .. | { Justinian, Institutes 3.13-4.5.<br>Gaius, Institutes 3.88-3.225.<br>Mackintosh, Roman Law of Sale. |
| 8. Canadian Constitutional Law.        | Clement.   |

Additional subjects for candidates for the American Law Book Company's Prize:—

- |                            |   |
|----------------------------|---|
| 9. The Law of Companies .. | { Palmer's Company Law.<br>Robson and Hugg's Leading Cases<br>on Company Law. |
|----------------------------|---|

10. Municipal Corporation Law. The Powers of Municipal Corporations to make contracts, and the manner in which they may contract; the general principles governing the exercise of these powers to pass by-laws; and their powers to create or establish highways and their liabilities with respect to the same when created. The Municipal Act (R.S.O. 1914, c. 192); Meredith and Wilkinson's or Robson and Hugg's Municipal Manual; and Robson and Hugg's Leading Cases; so far as they relate to the named subjects..

Each candidate for the American Law Book Company's Prize must present a thesis upon some subject relating to either of the additional subjects on or before the 31st of March in the year in which he presents himself for examination in his Third Year in the Faculty of Law. The subject of the thesis for the Prize for 1926 is "The advantages and disadvantages from a legal point of view and otherwise of the government of cities by Commission under special Act, as compared with the present system under the Municipal Act".

#### FOURTH YEAR

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|--------------------------------|--|
| 1. Medical Jurisprudence .. .  | Reese.   |
| 2. Law of Real Property ... .. | Armour's Real Property.  |
| 3. Commercial Law... ..        | { Chalmers' Sale of Goods, with<br>the Ontario Act of 1920.<br>Falconbridge's Banking and Bills<br>of Exchange, Book II. |
| 4. Conflict of Laws .....      | { Dicey's Conflict of Laws, or<br>Westlake's Private International<br>Law.   |
| 5. Law of Companies.....       | { Masten and Fraser's Canadian<br>Law of Companies.<br>Robson and Hugg's Leading<br>Cases on Company Law.                |

6. Construction and Operation of Statutes .....	Craie's Hardcastle on Statutes.
7. Criminal Law .. ..	Harris's Criminal Law or Kenny's Outline of Criminal Law.
8 Domestic Relations ... .	Stephen's General View of the Criminal Law.
	Eversley, Parts 1, 2 and 3.

#### THESIS

Each candidate for the degree of LL.B. must present a thesis satisfactory to the examiners in Law, upon some subject embraced in the curriculum, on or before the 31st March in the year in which he presents himself for examination in his Fourth Year in the Faculty of Law, or on or before the said date in any subsequent year. The subject of the thesis will be prescribed by the Senate, and will be announced at least eight months before the date upon which it is due. An oral examination on the subject of the thesis may be required at the option of the examiners in Law. Candidates for the degree may defer presenting the thesis until a subsequent annual examination, in which case the fee for examination shall be \$10.

#### REGULATIONS

##### FEEs

The following fees must be paid—

For matriculation or entrance . . . . .	\$10 00
For each examination after matriculation . . . . .	10 00
For each supplemental examination . . . . .	10.00
For the degree of LL. B. . . . .	20.00
For admission <i>ad eundem gradum</i> , LL.B. . . . .	20.00

A candidate will not be admitted to an examination unless he has paid all the fees due from him. A candidate who fails to pay his examination fees on or before the fifteenth of March—the last day for receiving fees prior to the Annual examination—must pay an additional fee of one dollar.

A candidate who fails to send his application for examination by the day appointed for receiving such applications must pay an additional fee of one dollar.

##### EXAMINATIONS

Every student who purposes presenting himself at any examination is required to send to the Registrar, not later than March 15th, a paper (according to a printed form which will be provided on application) stating his standing, and whether he is a candidate for Honours or otherwise.

Candidates who at any examination have failed in not more than two subjects may, with the consent of the Senate, present themselves for examination in such subjects at the next ensuing Supplemental examinations.

Undergraduates below the Fourth Year in the Faculty of Law, who have been rejected or who have been prevented from attending the annual examinations by sickness or other cause beyond their control, may, with the consent of the Senate, present themselves in September, at the time of the Supplemental examinations in Arts.

Candidates in the Faculty of Law shall not be required to pass an examination on those subjects in which they have already passed the required examination in the University of Toronto, or an equivalent examination in the course of studies prescribed by the Law Society of Upper Canada. Graduates in any Honour Course in the Faculty of Arts of this University shall not be required to pass an examination in Economics and in English Constitutional History.

Candidates who have taken the course at the Law School are required to present to the Registrar a certificate from the Secretary of the Law Society, showing the subjects in the Law School curriculum on which the candidate has passed examinations at the said school, and such certificates shall entitle the candidate to exemption from examination on the subjects mentioned in said certificate, where said subjects are included in the University curriculum in Law.

#### SUBJECT OF THESIS

The following is the subject for Thesis for candidates for LL.B. for the year 1926, viz.—

"A description and delimitation of the functions and jurisdiction of the Courts of Law in Federal Commonwealths, such as Australia, the United States and Canada, with special reference to the field they occupy under the constitution and their position as a separate branch of public service and government; and an investigation whether Modern Democracy acting through Parliament or through the Executive tends to strengthen and extend or to lessen the jurisdiction and authority or the independence of such Courts; and if the latter, whether such tendency is in the public interest."

NOTE.—Reference may be had to the following discussions:

1. Dicey on the Law of the Constitution.
2. The Supersession of the Law Courts by Bureaucracy,  
38 Law Magazine, 139
3. The Courts and the People,  
7 Columbia Law Rev. 559.
4. The Courts as Conservators of Social Justice,  
9 Columbia Law Rev. 567
5. Private Rights and Administrative Discretion,  
83 Central L.J. 165.

## CERTIFICATES OF HONOUR

Certificates of Honour will be given at each examination to those students who have been placed in Honours. The fee for such certificates shall be one dollar.

## STANDARDS

The standing for passing shall in the case of Arts subjects be fifty per cent., and in the case of the Law subjects be fifty per cent. on each subject of an examination, with an average of sixty per cent. on the whole. The standard for Honours shall be an average of seventy-five per cent of the marks assigned to all the subjects of the Year.

## WORKS OF REFERENCE

American and English Annotated Cases, American and English Encyclopædia of Law, Cyclopædia of Law and Procedure, Encyclopædia of Pleadings and Practice, Halsbury's Laws of England, the English and Empire Digest; Digest of Canadian Law by Dr. E R Cameron.

## DEGREE OF MASTER OF LAWS

Candidates for the said Degree must have been admitted to the Degree of Bachelor of Laws, must be of the standing of one year from admission to the Degree of Bachelor of Laws, must have presented a thesis satisfactory to the examiners in Law, and to the special examiners of such thesis appointed by the Senate, on some branch of law or of the history or philosophy of law, and must have passed the following examinations in the Faculty of Law, viz.:—

1. History of English Law: Pollock and Maitland, History of English Law.

2. English Constitutional Law: Gneist, History of the English Constitution, Select Cases in Constitutional Law—Broom, Constitutional Law, Part II. (Relation of the Subject to the Executive); and Part III. (Relation of the Subject to Parliament); Todd, Parliamentary Government in England.

3. Canadian Constitutional Law: Lefroy on Legislative Power in Canada; and subsequent reported cases on the subject

4. Criminal Law: Stephen, History of the Criminal Law (omitting chapters on History of Procedure, Summary Jurisdiction, and Indian Criminal Law).

5. International Law: Oppenheim, International Law, Third Edition. Constitution of the League of Nations. The British Orders in Council, 1914-1917, relating to the Declaration of London and to maritime retaliation, together with the related documents of other governments. Stowell and Munro. International Cases.

6. Jurisprudence: Salmond, Jurisprudence; Bryce, Studies in Jurisprudence; Hall, Foreign Jurisdiction of the British Crown.

7. Roman Law: Gaius and Ulpian, edition Muirhead, Roby's Roman Private Law in the times of Cicero and the Antonines.

8. Civil Code of Lower Canada and Roman Dutch Law: Text of the Civil Code; Lee, Roman Dutch Law.

Candidates shall have the option of taking the examination in two groups—subjects 1 to 4 and subjects 5 to 8—the groups being taken in any years after the necessary LL.B. standing has been attained. The thesis may be presented in the year of the second examination or in any subsequent year. A candidate taking the eight subjects together, and failing, shall be awarded standing in the subjects in which he obtains the standard set for passing provided he secures the required percentage in not less than four of the eight subjects, the thesis being returned not read.

The thesis must be sent to the Registrar in typewritten or printed form, not later than the thirty-first day of March.

The Senate may appoint special examiners for the whole or any part of the work prescribed for examinations for said degree.

The fee for the said degree shall be thirty dollars (\$30.00).

## PRIZES

The Edward Thompson Company's Prize of the first twenty-five volumes of the American and English Annotated Cases will be awarded to that undergraduate of First Year standing who as a candidate for the examination of the Second Year submits the best thesis on some branch of the law of Personal Property, of Contracts or of Trusts. The subject for 1926 is "A study of the law of Trusts in relation to personal property".

The Canada Law Book Company's Prize of a set of Halsbury's Laws of England will be awarded to that graduate of this University who having completed his course in the department of Political Science, and having passed the First Year examination at Osgoode Hall, has written a thesis on some portion of the work prescribed in the first examination at Osgoode Hall. The subject for 1926 is "A comparative study of the constitutions of Canada and Australia".

The award of these two prizes shall be made to the candidate who obtains the highest aggregate number of marks on all the subjects of the second examination and also the highest number of marks for the thesis and is recommended for the Prize by the regular and special examiners in Law. The thesis shall be sent to the Registrar, in typewritten or printed form, not later than the thirty-first of October, signed by the candidate's pseudonym, and shall be submitted to the special examiners for adjudication and report to the Senate. The special examiners shall, before the day of examination, fix the maximum number of marks to be allowed, and the minimum number of marks which must be obtained on the thesis. In determining the merit and value of the thesis, the examiners shall attach special importance to the literary qualities, and to the amount of original thought, research and investigation, which have been shown by the candidate in his treatment of the subject of the thesis.

The American Law Book Company's Prize of a complete set of their Cyclopædia of Law and Procedure will be awarded to the successful candidate in the Third Year who shall have obtained the highest aggregate number of marks in all the subjects of examination prescribed in the curriculum for said year, and also in the additional subjects of the Law of Companies and Municipal Law, prescribed for the said Prize, including a thesis upon some subject relating to either of those two additional subjects, and who shall be recommended for said prize by the examiners in Law and by the special examiners appointed to examine the thesis submitted by such candidates.

The Edward Thompson Company's Prizes of the American and English Encyclopædia of Law and of the Encyclopædia of Pleading and Practice will be awarded to the candidates for LL.B. who shall have received the highest and second highest aggregate number of marks at the examination

for that degree in the Faculty of Law in all the subjects prescribed for the Fourth Year, including the thesis upon a legal subject, required of such candidates, and who shall be recommended for the Prizes by the examiners in Law, and the special examiners appointed to examine the thesis submitted by such candidates.

The American Law Book Company's Prize of a complete set of their Cyclopædia of Law and Procedure will be awarded to the successful candidate for LL.M who shall have obtained the highest aggregate number of marks at the examination in subjects 5 to 8 for the said degree, including a thesis upon some branch of Law or of the history of philosophy of Law, and who shall be recommended for the said prize by the examiners in Law and by the special examiners to be appointed by the Senate to examine the theses submitted by such candidates.





CURRICULA AND REGULATIONS

FOR DEGREES AND DIPLOMAS IN

PHARMACY

AGRICULTURE

VETERINARY SCIENCE

PHYSICAL TRAINING

# CURRICULUM IN PHARMACY

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## DEGREE OF BACHELOR OF PHARMACY

### MATRICULATION

Candidates for the degree of Bachelor of Pharmacy must either:—

1. Possess a degree in Arts (not an Honorary degree) from some recognized University; or
2. Have already matriculated in the Faculty of Arts in this or some other University in Canada; or
3. Be matriculants in the College of Physicians and Surgeons of Ontario.

Provided always that all candidates registered as apprentices of the Ontario College of Pharmacy, or who have received the diploma of the College of Pharmacy up to the first day of July, A.D. 1898, shall be admitted as matriculants in the Department of Pharmacy on payment of the registration fee of five dollars.

### REGULATIONS

Undergraduates (candidates for the degree) resident in the Province of Ontario must have complied with all the requirements prescribed from time to time by the Council of the Ontario College of Pharmacy for admission to examination for a diploma licensing to practise Pharmacy in Ontario, and must have received from the Registrar of the Ontario College of Pharmacy a certificate of having passed the final examination of that College.

Candidates for the degree, not resident in Ontario, must have devoted at least four years (not being engaged in any other business) to the study of Pharmacy, being apprenticed during that time to a regularly qualified Pharmaceutical Chemist; must have attended the full courses of lectures embracing all the subjects of the curriculum, the length of each course being not less than that required from time to time by the Council at the Ontario College of Pharmacy, and including practical work of some College of Pharmacy recognized by this University; the last of which courses must be taken at the Ontario College of Pharmacy.

All candidates who have, prior to August 15th, 1892, received the diploma of the Ontario College of Pharmacy will not be required to conform to the above, but will be allowed their degree on passing the examination on the subjects hereinafter given.

Notice is hereby given that after July 1st, 1926, the course for the degree of Bachelor of Pharmacy shall extend over a period of at least two years.

## EXAMINATIONS

Candidates for the degree must pass an examination to be held in the month of May of each year—hour and date of commencing to be hereafter given—must present to the Registrar satisfactory certificates covering all the requirements relating to undergraduates as given above, and of having passed the final examination of the Ontario College of Pharmacy.

The subjects of the examination shall be as follows:—

1. Botany and Microscopy.
2. Theory and Practice of Chemistry and Toxicology.
3. Materia Medica, including Posology and Pharmacognosy.
4. Theory and Practice of Pharmacy.
5. Interpretation of Prescriptions.
6. Practical Dispensing.

These examinations shall be partly written, partly oral and partly practical.

No candidate shall be considered as having passed the examination who has not obtained fifty per cent. of the marks allotted; nor shall a candidate be considered as having passed in any subject who has not obtained at least forty per cent. of the marks allotted to such subject.

## FEES

For matriculation or registration of matriculation.....	\$5.00
For annual examination (each). ... ..	10 00
For each practical examination.....	0.50
For the degree of Phm.B.....	10 00

No fee shall be charged for transference from any Faculty of this University to the Department of Pharmacy.

# CURRICULUM IN AGRICULTURE

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## DEGREE OF BACHELOR OF THE SCIENCE OF AGRICULTURE

For many years students successfully completing the Two Year Course at the Ontario Agricultural College for the Associate Diploma, who obtained 50 per cent. general proficiency and 60 per cent. average in English subjects, were admitted to Third and Fourth Year Courses of study leading to the Degree of Bachelor of the Science of Agriculture. Commencing with the work of the First Year in the Session 1920-21 the Two Year Course for the Associate Diploma and the Four Year Course for the Degree of B.S.A. became entirely separate and distinct Courses. Applications for admission to the Course leading to the Degree will be considered on the basis of "Qualifications for Admission" stated below.

### QUALIFICATIONS FOR ADMISSION

All candidates for admission to the Four Year Course leading to the Degree of B.S.A

- (a) Must be eighteen years of age on or before the opening day of college.
- (b) Must produce satisfactory evidence as to moral character and physical ability.
- (c) Must produce certificate of having spent at least one year at work on a farm, and must have a practical knowledge of ordinary farm operations, such as harnessing and driving horses, plowing, harrowing, drilling, etc. When it is thought necessary, this knowledge will be tested by an examination at entrance or at any subsequent date.
- (d) Must at the request of the college physician submit to vaccination unless certificate of successful vaccination within two years is furnished.
- (e) Must pay in advance tuition fees and laboratory charges and make the required deposits on account of board, contingencies and other fees.
- (f) Must produce with application for entrance Ontario Pass Matriculation Certificate in Arts or Science except as defined in sub-sections 1 and 2 below.
  - (1) Credits of candidates whose education has been obtained outside of the Province of Ontario will be considered by special committee of the college staff.
  - (2) Candidates of mature age and extensive farm experience, but without Matriculation, may obtain admission to the Course leading to the degree by fulfilling the following conditions: (i) the completion

of the two year Associate Course, obtaining 40 per cent. in each subject of the second year with an average of 50 per cent. together with 60 per cent. in English; (ii) the completion of an Intermediate Year covering academic subjects exclusively, including English, Mathematics, Natural Sciences, and History. On the completion of the Intermediate Year such candidates will enter the Third Year of the Course leading to the degree.

All applications for admission *ad eundem statum* must be accompanied by official certificates of standing from the institutions where previous work has been done.

A student taking the Agriculture Option must have at least three years' practical farm experience before entering the Third Year.

A student taking the Dairy Option must have spent one season at practical work in each of three out of the following five: creamery, condensery, powder milk or city milk plant. A three months' Dairy School Course may be substituted for a season's experience in any one of the commercial plants.

#### FIRST YEAR

Agriculture—Animal Husbandry, Field Husbandry, Dairy Husbandry  
Horticulture, Apiculture, Poultry, Agricultural Economics, Farm  
Engineering.  
Bacteriology.  
Botany.  
Chemistry.  
English.  
Physics.  
Zoology.

#### SECOND YEAR

Agriculture—Animal Husbandry, Field Husbandry, Dairy Husbandry  
Horticulture, Apiculture, Poultry, Farm Engineering.  
Bacteriology.  
Botany.  
Chemistry.  
English.  
Entomology  
Genetics  
Physics.

#### INTERMEDIATE YEAR

(To be taken by students who have satisfactorily completed the first two years of the Associate Diploma Course and who wish to qualify for admission to the degree course.)

Bacteriology, Botany, Chemistry, English, Entomology, French,  
Genetics, History, Mathematics, Physics.

## THIRD AND FOURTH YEARS

One of the following Options:

1. General Agriculture
  - (a) Animal Husbandry
  - (b) Field Husbandry
2. Agricultural Science
3. Apiculture
4. Bacteriology
5. Botany
6. Chemistry
7. Dairy
8. Entomology
9. Horticulture

*Note*—Students entering the Third Year shall select their option not later than the 1st of April in the Second or Intermediate Years, after consultation with the head of the department concerned; and shall then notify the President of the College of their selection, and its approval by the Head above referred to

## THESIS

Each Fourth Year student is required to prepare a Thesis on some branch of department of the work in his special course.

The subject of each thesis must be approved by the Professor in whose Department it is taken, and must be submitted to the head of the Department of English who is convener of the Thesis Committee on or before the first of April of the Third Year. All theses must be handed to the Registrar on or before the first of April of the Fourth Year. No student whose thesis is unsatisfactory will be permitted to write on the Fourth Year examinations. The thesis must be based on original work. It must be typewritten on letter-sized paper (8½ x 11 inches) of good quality, and no corrections in writing must appear on the typewritten page. There must be a margin of one and a half inches on the left side of each page, and one inch on the other three sides, to allow for binding. Maps, charts, photographs, etc., must have one inch margin on the left side.

# EXAMINATIONS

## FIRST, SECOND AND THIRD YEARS

All First and Second Year students are required to pass two regular examinations during each year; one in December on the work of the fall term, and one in April on the work of the winter term, including classroom and laboratory work, experiments, etc. Third Year final examinations will be held in April. These examinations are conducted by the Ontario Agricultural College and are accepted by the University.

## FINAL FOR THE DEGREE

Examinations for the degree of B.S.A. are held annually by the University, at the close of the Fourth Year, in the month of May.

## SUPPLEMENTAL

Candidates for supplemental examinations must notify the Registrar in writing, at least two weeks before the dates fixed in the Calendar.

## FEES

Before writing the final examinations for the Degree of B.S.A. each candidate is required to pay the following fees to the Registrar of the College for transmission to the Bursar of the University—

Examination Fee. . . . .	\$10.00
Degree Fee . . . . .	10 00

The fee for a supplemental examination in the Final Year is \$10, payable to the Bursar of the University.

## STANDARDS FOR PASS AND HONOURS IN THE FINAL EXAMINATIONS

First Class Honours.. . . .	75%
Second Class Honours . . . . .	60-74%
Third Class Honours . . . . .	40-59%
Pass Standing . . . . .	40%

Each student must obtain an average of 50% on all major subjects and 50% in term work.



# CURRICULUM IN VETERINARY SCIENCE

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## DEGREE OF BACHELOR OF VETERINARY SCIENCE

The course leading to the Degree of Bachelor of Veterinary Science (B.V.Sc.), shall extend over a period of four academic years, of not less than seven months each.

### MATRICULATION

The standard adopted for the entrance requirement is based upon the successful completion, or the equivalent, of a high school course of four years in a Collegiate Institute, High School or Continuation School.

Candidates for admission to the Course in Veterinary Science must therefore, submit either—

1. A Normal Entrance or Junior Matriculation Certificate of Ontario.
2. A Certificate, equivalent in standard, of any Province of Canada, of any part of the British Empire, or of the United States of America.
3. Certificates other than those mentioned will be considered by the Senate in determining the status of applicants as undergraduates.
4. A Certificate of having passed a qualifying examination in English Composition, English Literature, British and Canadian History, Ancient History, Algebra, Geometry, Physics, and Chemistry, similar to the Normal Entrance examination of Ontario and represented in general by the Second Class Teacher's examinations of the Provinces of Canada.

To qualify for such a certificate candidates may present themselves at an examination centre in any Province of the Dominion at the time when the Department of Education of that Province holds its regular annual examinations, and at such other times and centres as may be approved by the Senate.

### ADMISSION TO ADVANCED STANDING

A student of a recognized veterinary college, or agricultural college, may be admitted to standing on conditions to be determined in each case by the Senate upon the report of the Ontario Veterinary College.

## CURRICULUM

Candidates for the Degree shall ordinarily complete the courses of instruction and examinations of the first, second and third years at the Ontario Veterinary College. The subjects of instruction and examination for the fourth year are as follows:

- Veterinary Medicine and Surgery.
- Infectious and Contagious Diseases of Animals.
- Obstetrics and Hygiene of Breeding Animals.
- Veterinary Materia Medica and Therapeutics
- Pathology.
- Bacteriology.
- Meat and Milk Hygiene.
- Veterinary Sanitary Service Laws and Regulations.

Examinations at the end of the fourth year shall be conducted by examiners appointed by and under regulations approved by the Senate.

The standard of passing shall be fifty per cent. in each subject with an average of sixty per cent. of the total number of marks assigned to the subjects.

The first class honour standard is seventy-five per cent. and the second class sixty per cent.

Any student failing in not more than three of the above subjects may take supplementary examinations in these subjects, and upon passing the same shall be entitled to receive the Degree.

Upon the successful passing of the examinations in the above subjects the students shall be entitled to receive the Degree of Bachelor of Veterinary Science (B.V.Sc.).

## DEGREE OF DOCTOR OF VETERINARY SCIENCE

The degree of Doctor of Veterinary Science is intended to be conferred under such conditions as will denote its receipt only by those distinguished for professional eminence.

A candidate for this degree shall be a graduate in Veterinary Science (B.V.Sc.) of the University of Toronto of at least three years' standing. He must present a thesis embodying the results of an original investigation conducted by himself on some subject approved by the Senate not later than the first of January.

The thesis must be based upon either:

- (a) The results of a special research.
- (b) The results of professional experience in a designated field allied to the live stock industry.

(c) The results of a special course of study extending over at least one year.

In order to be qualified for admission to the degree at the Annual Commencement in June, the thesis must be in the hands of the Registrar of the University not later than the first of May.

#### FEEs

*(Subject to change).*

Members of the graduating class will require to pay a fee of \$10.00 for examinations and the degree of Bachelor of Veterinary Science (B.V.Sc.). This fee is to be paid to the Bursar of the University before writing the final examinations. The fee for the degree of Doctor of Veterinary Science (D.V.Sc.) shall be \$15.00, which shall be paid on presentation of the thesis for the said Degree.

# CURRICULUM IN PHYSICAL TRAINING

## DIPLOMA IN PHYSICAL TRAINING FOR WOMEN

A diploma will be granted to women students of the University who shall have completed to the satisfaction of the Senate the following courses in Physical Training—

### FIRST YEAR

#### THEORY:

ELEMENTARY PHYSIOLOGY—A course of twenty lectures which will include a general account of the Anatomy of the human body, and a discussion of the elementary principles of physiology.

PERSONAL HYGIENE—A course of ten lectures.

#### PRACTICE:

A course of three hours weekly in the gymnasium and swimming pool including general Gymnastics, Apparatus, Games, Dancing, and Swimming.

### SECOND YEAR

#### THEORY:

FIRST AID—Fifteen lectures in First Aid Course of the St. John's Ambulance Association.

KINESIOLOGY—A course of ten lectures.

#### PRACTICE:

A course of four hours weekly in the Gymnasium and Swimming pool which will include General Gymnastics, Games, Dances, and Swimming.

### THIRD YEAR

#### THEORY.

GENERAL HYGIENE—A course of 25 lectures.

THEORY OF PHYSICAL EDUCATION and methods of teaching a course of 10 lectures.

#### PRACTICE:

A course of five hours weekly in the Gymnasium and Swimming pool including advanced Gymnastics, Games, Dances, and Swimming—Practice Teaching and Life Saving.

### FOURTH YEAR

#### THEORY:

PHYSIOLOGY OF EXERCISE—A course of ten lectures.

ANTHROPOMETRY—A course of ten lectures.

HISTORY OF PHYSICAL EDUCATION—A course of ten lectures.

#### PRACTICE:

A course of 5 hours weekly in the Gymnasium and Swimming pool including Advanced Gymnastics, Remedial Exercises, Games, Dances, Practice Teaching, Ornamental Swimming



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FEDERATED AND AFFILIATED COLLEGES

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## WYCLIFFE COLLEGE

Wycliffe College was founded in 1877 and incorporated in 1879. In 1885 it was affiliated with the University of Toronto, and federated in 1890 upon the proclamation of the Federation Act.

Its object is the Theological training of candidates for the ministry of the Church of England in Canada, and for the foreign missionary field.

In the University and University College its students receive instruction in the prescribed subjects of the Arts Course, as preliminary to the special study of Theology. The Theological course extends over a period of three years, and leads up to the degree of B.D., and D.D.

Part of the first year of the Theological Course may be taken concurrently with the Arts work of the University by means of the Theological options, and by following the schedule laid down in the Calendar of the College.

The first building of the College was erected in 1882. The work is now carried on in the second building erected in 1891, and added to in 1902, 1908, and in 1911, on the University Grounds and immediately adjoining the new Hart House. It contains rooms for 98 students, Convocation hall, lecture rooms, library, chapel, dining hall, etc.

Students are members of the Hart House, with its gymnasias and club rooms, and have all the privileges of the University.

## THE FACULTY

REV. T. R. O'MEARA, D.D., LL.D., (*Principal*), *Professor of Practical Theology, Homiletics and Pastoral Theology.*

REV. DYSON HAGUE, M.A., D.D., *Professor of Liturgics.*

REV. W. E. TAYLOR, M.A., PH D., *Professor of Ecclesiastical History and Apologetics.*

REV. E. A. MCINTYRE, M.A., D.D., *Professor of Systematic Theology.*

REV. C. V. PILCHER, M.A., D.D., *Professor of Old Testament Literature and Exegesis.*

REV. B. W. HORAN, M.A., B.D., *Professor of New Testament Literature and Exegesis.*

REV. W. R. R. ARMITAGE, M.A., M C., *Tutor.*

JOHN D. FALCONBRIDGE, ESQ., M.A., LL B., *Honorary Lecturer in Canon Law*

MIRIAM W. BROWN, *Lecturer in Reading and Voice Culture.*

*President and Chairman of the Council*

N. W. HOYLES, ESQ., B.A., K.C., LL.D.,

*Representatives on the University Senate*

THE PRINCIPAL, N. W. HOYLES, ESQ., B.A., K.C., LL.D.

J. D. FALCONBRIDGE, ESQ., M.A., LL.B., K.C

*Secretary to the Faculty*

REV. W. E. TAYLOR, M.A., D.D.

*Dean of Residence*

REV. B. W. HORAN, M.A., B.D.

*Librarian*

REV. E. A. MCINTYRE, M.A., D.D.

*Bursar and Registrar*

H. MORTIMER, ESQ. C.A.



## KNOX COLLEGE

Knox College was established at Toronto in 1844, as a theological seminary in connection with the Synod of the Presbyterian Church of Canada (Free Church), which had been organized in the same year. In 1858 it was incorporated by Act of Parliament. In 1861, in consequence of the union of the Synod of the Free Church and that of the United Presbyterian Church, as the Synod of the Canada Presbyterian Church, Knox College and the Theological Institute of the United Presbyterian Synod were united. Since the Union of 1875 Knox has been a College of the Presbyterian Church in Canada.

After several changes of location the buildings on Spadina Avenue were erected in 1875 and were occupied until 1914 when the College moved to the beautiful new buildings facing on the University Lawn. Knox College was affiliated with the University of Toronto in 1885, and federated in 1890, upon the proclamation of the Federation Act. In the University and University College such of its students as are not proceeding to a degree receive instruction during three sessions in English, Latin, Greek, History, Logic, Mathematics, Chemistry, Biology, Physics, Psychology, Mental and Moral Philosophy and Hebrew. The Regular University Course leading to the degree of B.A. is the preparation expected of entrants in Theology. The course in Theology extends over three years. In addition to the required course, a special course of study leads to the degree of B.D. A number of scholarships and prizes are offered for competition in each year. Religious Knowledge options may be taken by students of the University in any year of their course, and Theological options taken in the Third and Fourth years may be counted as part of the regular course in Theology. Courses of study in the New Testament are provided in Knox College for every year of the Undergraduate course, and may be taken as Religious Knowledge options for the University degree.

The College is governed by "The Board of Management": Mr. Thomas Bradshaw, Chairman; Rev R. C. Tibb, B.A., Secretary; The Treasurer of the Presbyterian Church in Canada is the Treasurer of Knox College. The "Board" consists of thirty-five members, appointed annually by the General Assembly of the Presbyterian Church in Canada.

THE FACULTY

- REV. ALFRED GANDIER, M.A., D.D., LL.D., *Principal and Professor of Homiletics and Pastoral Theology, Christian Missions and the English Bible.*
- REV. T. B. KILPATRICK, D.D., S.T.D. (Hart.), *Professor of Systematic Theology.*
- REV. RICHARD DAVIDSON, M.A., PH.D., D.D., *Professor of Old Testament Literature and Exegesis.*
- REV. WILLIAM MANSON, M.A., B.A., (Oxon.), D.D., *Professor of New Testament Literature and Exegesis.*
- REV. JOHN T. MCNEILL, M.A., PH.D., *Professor of Church History.*
- REV. HUGH MATHESON, LL.B., *Librarian.*
- REV. R. C. TIBB, B.A., *Secretary of Senate.*
- REV. D. M. RAMSAY, D.D., *Tutor in New Testament Greek.*
- REV. ALEXANDER MACMILLAN, D.D., *Lecturer on Hymnology and Church Music.*

## VICTORIA UNIVERSITY

## FACULTY OF THEOLOGY

The Faculty of Theology in Victoria College was established in 1871 for the purpose of training candidates for the ministry of the Methodist Church. Its classes and degrees have, however, always been open to candidates for the ministry in any Christian Church, and are now open to members in good standing in any such Church.

Instruction is provided in the various courses of study leading up to ordination in the Methodist Church, viz, the B.D. Course, the Course for Graduates in Arts, and the Course for Non-graduates. An arrangement has been entered into with Knox College for a large measure of co-operation in the work of instruction.

Undergraduates in Arts, whether candidates for the ministry or not, have the privilege of taking certain subjects in Theology as options in Religious Knowledge in the several years of their course, as indicated in this Calendar in the prescriptions of the Arts Courses.

For further information as to courses of study, fees, honours, prizes, scholarships and regulations, see the Theological Calendar of Victoria College, or apply to the Rev. Professor J. F. McLaughlin, B.A., D.D., Dean of the Faculty of Theology.

## THE FACULTY

REV F. H. WALLACE, M.A., D.D., *Professor Emeritus.*

REV. J. F. McLAUGHLIN, B.A., D.D., *Professor of Old Testament Exegesis and Literature.*

REV. R. P. BOWLES, M.A., D.D., LL.D., *Professor of Systematic Theology.*

W. B. LANE, M.A., PH.D., *Professor of Ethics and Didactics.*

REV. W. H. GREAVES, M.A., *Professor of Public Speaking.*

REV. A. J. JOHNSTON, B.A., D.D., *Professor of Homiletics and Pastoral Theology and of Church History.*

REV. J. W. MACMILLAN, B.A., D.D., *Professor of Sociology.*

REV. J. H. MICHAEL, M.A., *Professor of New Testament Exegesis and Literature.*

REV. W. A. POTTER, M.A., B.D., *Professor of Old Testament Exegesis and Literature.*

REV F. W. LANGFORD, B.A., M.R.E., *Professor of Religious Pedagogy*

W. T. BROWN, M.A., PH.D., *Professor of Ethics and Apologetics.*

REV. F. L. BARBER, M.A., PH.D., *Special Lecturer in History of Preaching.*

## ONTARIO COLLEGE OF PHARMACY

The Council of the College of Pharmacy, the biennially-elected governing body of the practising pharmacists of the Province of Ontario, began in 1882 to give instruction in the various subjects necessary for license for pharmaceutical chemists. The College Building, situated in St. James Square, was erected in 1886, and the Faculty reorganized and extensive additions made to the building in 1891. In the same year affiliation was entered into with the University of Toronto. For curriculum, see p. 796. For details as to laboratory and other courses, preliminary qualifications, etc., see Annual Announcement of the College, which may be had by addressing J. F. Roberts, Registrar-Treasurer, Ontario College of Pharmacy, Toronto, Ontario.

## THE FACULTY

CHARLES F. HEEBNER, PH.G., PHM.B., F.C.I.C., *Dean, Professor of Theory and Practice of Pharmacy and Dispensing, Director of the Pharmaceutical and Dispensing Laboratories.*

PAUL L. SCOTT, M.B., *Professor of Biology.*

R. O. HURST, PHM.B., *Lecturer in Latin, Posology and Materia Medica.*

ORVILLE P. WATSON, PHM.B., F.C.I.C., *Lecturer in Chemistry and Physics, Director of the Chemical Laboratory.*

JOHN T. FOTHERINGHAM, B.A., M.D.C.M., *Emeritus Professor of Materia Medica.*

GRAHAM CHAMBERS, B.A., M.B., *Emeritus Professor of Chemistry.*

GEORGE A. EVANS, PHM.B., F.C.I.C., *Emeritus Professor of Chemistry.*

## ONTARIO AGRICULTURAL COLLEGE

1924-1925

## ADMINISTRATIVE OFFICERS

- J. B. REYNOLDS, M.A., *President*  
S. SPRINGER, *Bursar*  
A. M. PORTER, B.S.A., *Registrar*  
MARGARET I. ODROSKIE, *President's Secretary*.  
R. E. BALCH, B.S.A., *Dean of Residence*.  
ANNIE O. HALLETT, *Librarian*.  
GERTRUDE M. HILBORN, *Assistant Librarian*.  
DR. ANNIE ROSS, *Matron*  
MISS C. McKEIL, *Dietitian*.  
MRS. K. T. FULLER, *Superintendent Macdonald Hall*.

## FACULTY OF INSTRUCTION AND LABORATORY STAFF

- J. B. REYNOLDS, M.A., *President*.  
H. H. DEAN, B.S.A., *Professor of Dairy Husbandry*.  
C. A. ZAVITZ, B.S.A., D.Sc., *Professor of Field Husbandry*.  
R. HARCOURT, B.S.A., *Professor of Chemistry*  
JOHN EVANS, *Professor of Manual Training*  
W. R. GRAHAM, B.S.A., *Professor of Poultry Husbandry*  
J. E. HOWITT, M.S.A., *Professor of Botany*.  
D. H. JONES, B.S.A., *Professor of Bacteriology*.  
O. J. STEVENSON, M.A., D.Paed., *Professor of English*.  
WADE TOOLE, B.S.A., M.S., *Professor of Animal Husbandry*.  
F. E. MILLEN, B.S.A., *Professor of Apiculture*  
W. C. BLACKWOOD, B.A.Sc., *Professor of Physics*  
A. LEITCH, B.S.A., *Professor of Farm Economics*  
OLIVE CRUIKSHANK, B.A., *Director of Home Economics*.  
L. CAESAR, B.A., B.S.A., *Professor of Economic Entomology*.  
A. H. MACLENNAN, B.S.A., *Professor of Horticulture*.  
A. W. BAKER, B.S.A., *Professor of Entomology*  
R. D. COLQUETTE, B.S.A., *Professor of Marketing Economics*.  
F. N. MARCELLUS, B.S.A., *Professor of Poultry Husbandry*.  
J. W. MACARTHUR, M.A., Ph.D., *Professor of Genetics*.  
W. J. SQUIRRELL, B.S.A., *Associate Professor of Field Husbandry*.  
G. H. UNWIN, B.A., B.S.A., *Associate Professor of English*.  
H. L. FULMER, B.S.A., M.A., *Associate Professor of Chemistry*.  
TO BE APPOINTED, *Associate Professor of Bacteriology*  
R. E. STONE, B.Sc., Ph.D., *Associate Professor of Botany*.  
A. L. GIBSON, B.S.A., *Associate Professor of Chemistry*.

- J. C. STECKLEY, B.S.A., *Associate Professor of Animal Husbandry.*  
 R. R. GRAHAM, B.A., B.S.A., *Associate Professor of Physics.*  
 A. H. TOMLINSON, B.S.A., *Associate Professor of Horticulture.*  
 R. G. KNOX, B.S.A., *Associate Professor of Animal Husbandry*  
 ANNIE ROSS, M.D., C.M., *Lecturer in Physiology, Home Nursing and Psychology*  
 E. W. KENDALL, *Specialist in Manual Training.*  
 R. C. MOFFATT, M.A., *Lecturer in Physics.*  
 F. L. FERGUSON, B.S.A., *Lecturer in Physics*  
 J. COKE, B.S.A., M.S., *Lecturer in Farm Economics.*  
 W. H. SPROULE, B.S.A., *Lecturer in Dairy Husbandry.*  
 A. DAVEY, B.S.A., *Lecturer in Bacteriology*  
 A. C. WHEATLEY, B.A., *Lecturer in Chemistry*  
 E. C. MCLEAN, M.A., *Lecturer in English.*  
 E. E. REILLY, B.S.A., M.S., *Lecturer in Farm Economics*  
 O. MCCONKEY, B.S.A., M.S., *Lecturer in Field Husbandry.*  
 D. R. SANDS, B.S.A., M.S., *Lecturer in Botany*  
 D. A. KIMBALL, B.S.A., *Lecturer in Horticulture.*  
 G. E. RATHBY, B.S.A., *Lecturer in Animal Husbandry.*  
 JEAN RODDICK, *Instructor in Household Science.*  
 FRANCIS M. McNALLY, M.A., *Instructor in Normal and Extension Methods*  
 KATHERINE D. DOUGHERTY, B.S., *Instructor in Domestic Art.*  
 JEAN C. BRADLEY, B.S., *Instructor in Household Science.*  
 J. A. FLOCK, B.S.A., *Lecturer in Entomology.*  
 S. WATERMAN, B.S.A., *Lecturer in Chemistry.*  
 BELLA MILLAR, *Demonstrator in Dairying*  
 S. R. CURZON, B.S.A., *Demonstrator in Chemistry*  
 W. G. EVANS, B.S.A., M.S., *Demonstrator in Botany*  
 G. L. JARVIS, B.S.A., *Demonstrator in Apiculture*  
 H. A. SMALLFIELD, B.S.A., M.S., *Demonstrator in Dairying.*  
 T. J. MCKINNEY, *Instructor in Dairying.*  
 MARGARET REID, B.H. Ec., *Instructor in Household Art.*  
 E. J. DYCE, B.S.A., *Demonstrator in Apiculture.*  
 WINNIFRED A. SCHENCK, B.S., *Instructor in Domestic Art.*  
 OLIVE M. DOBBYN, Ph.B., *Instructor in Household Management*  
 R. H. OZBURN, B.S.A., *Demonstrator in Entomology.*  
 R. E. BALCH, B.S.A., *Instructor in English.*  
 KATHLEEN K. PEPLER, *Demonstrator in Physical Training (Macdonald Institute)*  
 D. F. ADAMS, *Physical Instructor (O.A.C.).*

## RESEARCH STAFF

## CHEMISTRY

- S. R. CURZON, B.S.A., *Food Investigation.*  
 M. ALICE PURDY, *Flour Testing.*

## FARM ECONOMICS

G. W. MICHAEL, B.S.A., *Chief Field Supervisor.*

C. W. RILEY, B.S.A., *Assistant in Cost Accounting.*

## ENUMERATORS

W. S. ROWE.

W. J. FAIRWEATHER.

G. H. EDWARDS, B.S.A.

J. B. HOODLESS, B.S.A

## FIELD HUSBANDRY

A. W. MASON, B.S.A., *Assistant Experimentalist*

A. E. WHITESIDE, *Assistant in Plant Selection.*

J. BUCHANAN, B.S.A., *Specialist in Plant Breeding.*

## HORTICULTURE

C. C. EIDT, B.S.A

## POULTRY

E. S. SNYDER, B.S.A., M.S.

J. F. FRASER, B.S.A.

## EXTENSION STAFF

LIONEL STEVENSON, B.S.A., M.S., *Director of Extension.*

J. F. FRANCIS, B.S.A., *Poultry Husbandry.*

V. C. LOWELL, B.S.A., *District Supervisor of Drainage.*

W. P. SHOREY, B.S.A., *District Supervisor of Drainage.*

F. W. PRESANT, B.S.A., *Assistant Vegetable Specialist.*

## TEMPORARY STAFF

## CHEMISTRY

G. N. RUHNKE, B.S.A., *Soil Surveys.*

N. J. THOMAS, B.S.A., *Soil Surveys.*

## DAIRY SCHOOL

January—March

A. P. CLARK, B.S.A., *Milk and Cream Testing.*

F. W. HAMILTON, B.S.A., *Market Milk.*

C. E. LACKNER, B.S.A., *Cream Separators*

D. McMILLAN, B.S.A., *Buttermaking.*

FIELD HUSBANDRY

R. KEEGAN, B.S.A., *Field Husbandry*.

PHYSICS

W. B. GEORGE, B.S.A., *Drainage*

POULTRY

T. W. BRENNAND, B.S.A.

E. H. MARSTON, B.S.A.

J. B. SMITH, B.S.A.



## THE ONTARIO VETERINARY COLLEGE

In 1862, through the efforts of the late Hon. Adam Fergusson of Woodhill and the late George Buckland, Professor of Agriculture in the University of Toronto, Professor Andrew Smith, a graduate of the Edinburgh Veterinary College, was appointed to give instruction in Veterinary Studies in the Province of Upper Canada. The Veterinary College thus established was later taken over by the Government of the Province of Ontario and affiliated with the University of Toronto, from which graduates of the College may receive the degree of Bachelor of Veterinary Science and Doctor of Veterinary Science. See Curriculum in Veterinary Science elsewhere in this volume.

## COLLEGE STAFF AND SUBJECTS TAUGHT, 1924-25

- C. D. MCGILVRAY, M.D.V., D.V.Sc., *Contagious Diseases, Sanitary Service.*  
 J. N. PRINGLE, M.R.C.V.S., B.V.Sc., *Sporadic Diseases, Physiology.*  
 R. A. MCINTOSH, M.D.V., *Obstetrics, Special Therapeutics.*  
 W. J. R. FOWLER, B.V.Sc., *Surgery, Materia Medica.*  
 H. D. NELSON, D.V.Sc., *Anatomy.*  
 F. W. SCHOFIELD, D.V.Sc., *Pathology, Parasitology.*  
 H. E. BATT, B.V.Sc., *Histology, Meat Inspection.*  
 R. GWATKIN, D.V.Sc., *Bacteriology, Milk Hygiene.*  
 L. STEVENSON, B.S.A., M.Sc., *Physiology.*  
 F. C. GRENSIDE, V.S., *Horsemanship.*  
 J. G. HARVEY, B.V.Sc., *Cattle Diseases.*  
 GEO. DREW, *Jurisprudence.*  
 R. HARCOURT, B.S.A., *Ontario Agricultural College, Chemistry.*  
 W. TOOLE, B.S.A., *Ontario Agricultural College, Animal Husbandry.*  
 J. E. HOWITT, M.S.A., *Ontario Agricultural College, Botany.*  
 O. J. STEVENSON, M.A., D.PAED., *Ontario Agricultural College, English and Public Speaking.*  
 W. C. BLACKWOOD, B.A.Sc., *Ontario Agricultural College, Physics.*  
 A. LEITCH, B.S.A., *Civics, Economics.*

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## APPENDIX

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## REGISTER OF STUDENTS, 1924-1925

## FACULTY OF ARTS

## FIRST YEAR

C—University College; V—Victoria College, T—Trinity College;  
M—St. Michael's College.

College Name	Home Address	College Name	Home Address
C Adams, G. W. . . .	Toronto	V Bateman, Miss J. E. . .	Mount Forest
C Adamson, A. . . .	Clarkson	V Bates, Miss L. D. . .	Kobe, Japan
V Addison, W. J. C. . .	Toronto	C Baughman, Miss L. . .	Barrie
IM Agnew, W. D. . . .	Toronto	C Baxter, Miss H. J. . .	Toronto
V Ahara, R. L. . . .	Toronto	C Bean, Miss F. M. . .	Kitchener
V Aitchison, Miss P. T. .	Hamilton	V Beare, H. E. . . .	Pickering
C Atken, W. T. . . .	Toronto	C Beatty, S. . . .	Brampton
C Alison, Miss D. E. . .	Toronto	C Becksted, Miss M. C. .	Iroquois
T Allen, Miss F. B. . .	Mount Forest	C Beder, M. C. . . .	Toronto
V Allen, Miss R. H. . .	Toronto	C Beer, W. A. . . .	Toronto
M Allen, W. J. A. . . .	Toronto	C Bell, A. M. . . .	Chatham
C Ament, A. R. G. . . .	Seaforth	V Bellsmith, C. F. P. . .	Cooksville
C Anderson, W. G. . . .	Toronto	C Bellsmith, Miss F. I. .	Toronto
T Andras, Miss M. G. . .	Toronto	T Ben-Oliel, Miss V. B. .	Collingwood
C Andrew, M. W. . . .	St. Thomas	T Berry, E. W. . . .	St. Mary's
V Andrews, Miss B. M. .	Aurora	C Bertram, F. W. . . .	Toronto
C Andrews, Miss C. . .	Toronto	C Bertram, R. C. . . .	Toronto
V Annetts, Miss M. . .	Toronto	C Best, Miss F. M. . .	Toronto
C Appelbe, Miss H. M. .	Toronto	C Better, J. . . .	Toronto
C Archibald, J. C. . . .	Seaforth	V Birge, C. A. . . .	Oakville
T Armstrong, A. T. R. . .	Langstaff	M Black, A. V. . . .	Peterborough
*C Armstrong, C. . . .	Oakville	C Blackwell, C. S. . .	Toronto
V Armstrong, Miss H. P.	Toronto	V Blair, W. D. . . .	Woodstock
C Arthur, Miss B. R. . .	Collingwood	C Blyth, R. A. . . .	Kenilworth
C Ashbridge, Miss D. S. .	Toronto	C Boake, M. R. W. . . .	Toronto
V Ashton, G. E. . . .	St. Thomas	M Bolger, J. R. . . .	Georgetown
M Atkinson, Miss M. E. .	Toronto	C Bond, B. C. . . .	Caledonia
C Austen, A. B. . . .	Toronto	C Bonus, R. R. . . .	St. Mary's
C Baikie, Miss K. J. . .	Sudbury	C Borinsky, N. . . .	Stouffville
C Bailey, F. G. . . .	Toronto	T Branion, H. D. . . .	Dunnville
V Baker, A. B. . . .	Bigwood	C Brett, Miss E. E. . .	Toronto
C Baker, G. R. G. . . .	Toronto	M Brett, J. H. . . .	Kenora
T Baldwin, R. R. A. . .	Toronto	C Brettingham, Miss M. F. .	Toronto
V Ball, Miss B. A. . . .	Toronto	C Brewster, L. S. . . .	Hespeler
C Ballentine, J. C. . .	Carnduff, Sask.	C Bridgewater, T. H. . .	Toronto
C Balthazard, Miss I. G. .	Toronto	C Brown, Miss A. E. . .	Toronto
C Banks, W. J. . . .	Toronto	C Brown, D. G. . . .	Toronto
V Barker, J. G. . . .	Cannington	C Brown, J. P. E. . . .	Toronto
V Barner, H. D. . . .	Calgary, Alta.	V Brunt, H. B. . . .	Hanover
T Barrett, H. M. . . .	Windsor	C Brunton, W. H. . . .	Marvelville
C Barrington, C. R. . .	Russell	C Brydone, Miss A. H. .	Milverton
C Bartlett, J. A. . . .	Toronto	V Buchanan, Miss M. E. M.	Toronto
C Bartram, V. W. . . .	Toronto	V Buik, Miss H. A. . .	Toronto
C Batcheller, Miss D. O. .	Toronto	C Burch, M. E. . . .	Scarboro Jct.

\*Michaelmas Term.

†Dispensation for Session.

College Name	Home Address	College Name	Home Address
C Cameron, A. Y.	Cobourg	C Cringan, Miss C. G.	Toronto
C Campbell, E. C.	Toronto	C Crooks, Miss E. M.	Toronto
C Campbell, L. R.	Toronto	C Crozier, H. G.	Tavistock
C Campbell, R. G.	Toronto	C Crozier, Miss V.	Toronto
C Campbell, W. M.	Toronto	C Culp, Miss E. M.	Beamsville
C Canham, R. B.	Toronto	V Cummings, Miss M. A.	Thornbury
V Cannon, Miss T. C.	Freeman	C Currie, J. G.	Victoria Harbour
V Cannon, G. E.	Toronto	C Currie, Miss M. A.	Hamilton
M Carey, F. A.	Toronto	C Curtis, J. U.	Toronto
C Carr, Miss E. M.	Barrie	T Daly, G. H.	Napanee
C Carr, Miss H. H.	Toronto	C Danard, Miss E.	Owen Sound
C Carrick, D. D.	Toronto	C Dargavel, W. G.	Toronto
C Carruthers, G. L.	Toronto	V Davidson, D. J.	Heathcote
V Carscallen, C. N.	Lucan	C Davis, Miss H. J.	Toronto
V Carter, Miss H. R.	Pictou	T Davis, Miss I. A. C.	Toronto
C Cassels, Miss C. G.	Toronto	C Day, C. R.	Toronto
C Cathers, C. A.	Toronto	V Dean, D. W.	Toronto
C Catto, K. A.	York Mills	C Dean, M. P.	Toronto
C Chadwick, Miss H. R.	Toronto	C Deeks, G. C.	Toronto
C Channen, A. G.	Barrie	*C Delahey, F. C.	Pembroke
T Chisholm, Miss M. D.	Milton	C Dewart, E. H.	Toronto
C Christie, A. T.	Hamilton	V Diamond, A. D.	Toronto
V Christie, Miss K. P.	Brantford	C Dingle, D. B.	Toronto
V Clare, Miss M. P.	Marmora	C Dinsmore, Miss G. R.	St. Mary's
C Clarke, C. G.	Waterloo	T Ditchburn, Miss E. E. H.,	Gravenhurst
M Clark, Miss D. G.	Hamilton	C Dobie, Miss D. J.	Port Arthur
T Clark, F. P.	Toronto	C Dodgson, H. S.	Toronto
M Clark, J. H.	Florence, N.Y.	V Douglas, A. C.	Toronto
C Clark, Miss M. E.	Midland	C Douglas, W. D. A.	Shelburne
M Clark, W. J.	Florence, N.Y.	V Douglas, W. R. S.	Norval
M Cleary, F. J.	Brechin	C Dowling, Miss B. V.	Galt
*C Clute, Miss E. A.	Toronto	C Dowling, I. M.	Brantford
M Coady, J. N.	Toronto	C Downer, A. W.	Egbert
V Coburn, Miss K. H.	Toronto	V Dudgeon, H. G.	Toronto
C Cohen, A.	Toronto	M Duff, J. M.	Campbellford
C Cohen, O.	Dundas	V Duggan, Miss R. E.	Brampton
T Cole, T. F.	Toronto	C Dunbar, D. M.	Estevan, Sask.
V Coleman, Miss M.	North Bay	*C Dunbar, W. E.	Hamilton
T Collins, V. B. J.	Allandale	C Duncan, Miss M. M.	Brantford
T Combe, Miss A. J.	Clinton	C Dundas, F. N.	Toronto
C Conn, G. E.	Tillsonburg	C Dunn, A. W.	Leamington
C Conrad, Miss G. E. L.	Waterloo	M Dunn, Miss B. C.	Toronto
M Cooke, Miss P. B.	Toronto	C Dutton, Miss D. I.	Guelph
C Cooper, M.	Toronto	M Dwyer, Miss S.	Toronto
C Corbett, W. C.	Ft. William	T Edgar, F. S.	Preston
C Cornish, Miss L. R.	Toronto	C Elliott, H. C.	Toronto
M Coughlin, Miss H. K.	Toronto	C Elliott, M. J.	Wardsville
V Courtice, Miss I. L.	Leamington	M Embser, J. W.	Toronto
M Cowan, R. G.	Toronto	V Emerson, Miss P. H.	Toronto
T Cox, Miss D. H.	Oakville	M Enright, W. G.	Toronto
V Cragg, R. C.	Peterborough	C Eoll, Miss M. R.	Calgary, Alta.
C Craw, W. A.	Peterborough	C Essery, Miss A. K.	Toronto
C Cray, W. M.	Guelph	T Etler, Miss D. H. C.	Gravenhurst
C Creech, Miss E. I.	Toronto	C Evans, C. C.	Sudbury
T Crighton, Miss M. M.	Toronto		

\*Michaelmas Term.

College Name	Home Address	College Name	Home Address
C Evans, Miss C. M.	Toronto	C Gordon, Miss S.	Passaic, N.J.
C Evans, F. J. L.	Orillia	*V Gould, Miss H. M.	Uxbridge
†C Evans, K. C.	Shanghai, China	M Graham, Miss G. M.	Toronto
T Eward, H. K.	Toronto	V Graham, Miss M. M.	Toronto
C Fairbairn, Miss M. E.	Toronto	C Gray, H.	Toronto
C Farish, Miss V.	Buffalo, N.Y.	C Green, W. L.	Sault Ste. Marie
C Farquharson, D. G.	Black River	C Greenwood, W. H.	Toronto
	Jamaica	C Greer, Miss D. C.	Toronto
C Ferguson, G.	Shelburne	C Greisman, Miss G.	Toronto
C Ferguson, J. K. W.	Toronto	V Grey, E. W. W.	Brampton
C Ferguson, Miss K. M.	Caledonia	V Gundy, H. P.	Toronto
V Field, H. W.	Creemore	T Hadley, I. R.	Toronto
T Finlay, Miss M. J. J.	Niagara Falls	C Haug, Miss D. G.	Havelock
V Fisher, M. C.	Woodville	C Haines, Miss D. I.	Toronto
M Fitzgerald, Miss M. R.	Hillsdale	C Hall, G. E.	Lindsay
M Fitzpatrick, Miss F. T.	Hamilton	V Hall, H. C.	Guelph
C Fleury, Miss A. D.	Brampton	V Hall, W. S.	Brussels
C Fleury, Miss C. W.	Brampton	M Halligan, J. C.	Toronto
M Foley, P. J.	Toronto	T Hallock, R. T.	Fanbault, Minn.
C Follis, W. D.	Toronto	C Halls, D. J.	Toronto
C Ford, Miss E. L.	Toronto	*C Ham, N.	Brantford
C Forster, Miss J. M.	Toronto	M Hamilton, Miss M. M.	Stratford
C Fortier, J. N. G.	Quebec, Que.	C Harkness, Miss M. E.	Toronto
*M Fortura, R.	Thorold	M Harrington, G. J.	Toronto
V Forward, Miss M. A.	Ottawa	C Harris, R. A.	Toronto
T Foster, Miss K. E.	Toronto	M Harris, Miss V. M.	Toronto
*C Foster, W. A. D.	St. John, N.B.	M Harrison, Miss D. M.	Toronto
C Fowler, R. M.	Peterborough	C Harrison, Miss R. E.	Owen Sound
C Franklin, Miss E. M.	Toronto	M Hartmann, E. J.	Brantford
C Fraser, Miss A. G. M.	Toronto	C Haydon, Miss F. M. W.	Toronto
T Fraser, Miss D. M.	Niagara Falls	M Hayes, Miss A. C.	Toronto
C Freedman, S. S.	Toronto	M Hayes, Miss M. C.	Smiths Falls
C French, Miss M. H.	Caledonia	T Heggie, Miss M. M.	Brampton
V Fulton, Miss A. E.	Chesterville	C Helper, Miss R.	Toronto
V Fulton, E. D.	Lindsay	V Henderson, Miss M. M.	Waterloo
C Fulton, J. A. G.	Toronto	C Herman, L.	Toronto
V Fulton, Miss J. E.	Chesterville	C Hethrington, A. S.	Toronto
C Gale, G. A.	Vancouver, B.C.	C Hewitt, A. W.	Toronto
C Gardiner, Miss A. E.	Toronto	V Heyland, Miss J. M.	Toronto
M Garvey, E. C.	Goderich	M Hiland, Miss V.	Peterborough
C Cassard, H. L.	Toronto	C Hill, Miss V. J.	Toronto
T Gear, Miss W. M.	Orton	C Hiltz, A. G.	Toronto
C Gibb, H. H.	Toronto	C Hinds, Miss I. A.	Toronto
M Gibbons, R. J.	Toronto	V Hobberlin, A. J.	Toronto
C Gibson, Miss J. L.	Caledonia	C Hobday, Miss K. M.	Toronto
C Gibson, T. H.	Toronto	V Hodgson, T. H.	Toronto
C Giffen, F. J.	Stayner	V Hoffman, C. M.	Toronto
V Gilbert, L. A.	Lambeth	C Hogg, Miss I. R.	Preston
V Gill, J. L.	Toronto	C Holt, Miss M. A.	Flat Rock, Mich.
C Godfrey, Miss E. I.	Port Credit	*C Home, K. P.	Toronto
T Goldnitz, H. J.	Mitchell	C Horkins, T. B.	Toronto
C Goodman, H. G.	Toronto	V Horwood, Miss J. A.	St. John's, Nfld.
M Goodrow, Miss M. G.	Hamilton	M Howell, Miss T. C.	Toronto
C Gordanier, Miss H. G.	Windsor	V Howitt, Miss M.	Waterloo, Que.
C Gordon, Miss M. E.	Toronto		

\*Michaelmas Term.

†Easter Term

College Name	Home Address	College Name	Home Address
M Huggins, Miss R. E.	Toronto	M Kormann, I. F.	Toronto
C Hunt, H. R.	Brantford	C Lacey, Miss M.	Chesterville
V Hunter, R. G.	Clinton	C Lancashire, G. H.	Millbrook
T Hutchinson, J. L.	Toronto	C Langley, Miss N. K.	Toronto
C Hutner, Miss F.	Toronto	T Lasher, G. A.	Richmond Hill
C Ide, F. P.	Ottawa	C Latchford, L. G.	Toronto
C Innes, J. W.	Toronto	M Latchford, Miss N. F.	Toronto
M Irvine, A. E.	Toronto	C Latham, W. R.	Toronto
C Jackson, W. H.	Pickering	C Laughlin, J. E.	Toronto
*C Jaffray, R.	Oakville	M Lavelle, Miss H. C.	Toronto
**† Jaffray, R.	Oakville	V Lawrason, A. B.	Toronto
C James, E. S.	Toronto	C Lawson, Miss K. E.	Toronto
T Jacques, R. S.	Toronto	M LeBoldus, J. M.	Regina, Sask.
C Jeffrey, A. H.	Toronto	C Lehman, A. T.	Toronto
C Jenkinson, M.	Niagara Falls	C Lehman, W. E.	Toronto
C Jennings, R. D.	Toronto	V Leitch, Miss E. M.	Regina, Sask.
T Jermyn, Miss E. L.	Whitby	*V Leslie, C. W.	Ingersoll
T Jermyn, H. W.	Whitby	C Levy, N.	Toronto
C Johnston, D.	Toronto	V Lewis, C. L.	Wallaceburg
*V Johnston, Miss E. A.	Toronto	V Lewis, S. E.	Brampton
C Johnston, Miss E. W.	Ottawa	C Lewis, Miss V. B.	Toronto
M Johnston, Miss F. M.	Toronto	V Lidkea, Miss V. I.	North Bay
V Johnston, Miss M. S.	Toronto	C Lighthart, Miss D. G.	Guelph
C Johnston, W. W.	Walkerton	M Lindcnfield, C. E.	Parkhill
V Jolley, W. R.	Limehouse	V Lindsay, F. R.	Hagersville
V Jones, C. H.	Bancroft	C Lockhart, R. S.	Woodstock
C Jones, F. M. C.	Toronto	C Long, A. E.	Toronto
C Jones, H. B. L.	Toronto	T Loosmore, R. H.	Toronto
M Jones, Miss I. B.	Ottawa	M LoPresti, A.	Toronto
V Jones, Miss M. E.	Toronto	V Loraaway, Miss H. A.	Welland
C Jull, J. W.	Toronto	C Love, Miss J. C.	Ailsa Craig
C Jull, R. B.	Toronto	C Lugsdin, Miss E. L.	Moncton, N.B.
C Karstedt, J.	Flesherton	C Lyon, L. R.	Toronto
V Keffer, Miss G. E.	Hespeler	M Lyons, Miss M. K.	Toronto
C Kellerman, M.	Toronto	C McBride, Miss E. L.	Port Dover
C Kellock, Miss C.	Huntsville	C McBride, Miss I. H.	Toronto
M Kelly, C. M.	Toronto	C McBurney, R. W.	Sarnia
M Kelly, J. J.	Toronto	M McCabe, G. P.	Toronto
C Kemple, Miss M. T.	New Rochelle, N.Y.	C MacCallum, Miss H. M.	Toronto
V Kendall, R. V.	Toronto	C McCannell, J. D.	Toronto
C Kennedy, Miss J. N.	Acton	M McCarthy, T. A.	Barrie
C Kennedy, Miss P. M.	Toronto	C McCausland, J. K.	Toronto
V Kenny, M. K.	Whitby	C McClellan, G. A.	Toronto
C Kenny, R. C.	Toronto	C McCormick, P. H.	Galt
C Kerswell, Miss E. M.	Elgin Mills	V McCubbin, Miss C. E.	Chatham
C Kidd, Miss A. D.	Cannington	V McCulloch, Miss R. M.	Toronto
C Kilgour, J. A.	Oakville	C McCutcheon, S.	Lambton Mills
V King, G. H.	Orillia	M McDevitt, Miss M. B.	Newmarket
M King, J. M.	Stratford	C McDiarmid, F. J.	Ottawa
V Kitching, J. S.	Hornby	C Macdonald, D. W.	Toronto
C Komaroff, Mrs. E.	Toronto	C Macdonald, E. A.	Sarnia
C Kompass, A. S.	Hamilton	M McDonald, J. A.	Toronto
		M Macdonald, R. J.	Toronto

\*Michaelmas Term

\*\*Duplicate Registration.

†Easter Term.

College Name	Home Address	College Name	Home Address
*C McDonald, Miss R. F.	Toronto	C Matthews, P. W.	Toronto
C Macdonell, R. B. G.	Toronto	†C Matthews, W. D.	Toronto
M McDonnell, T. C.	Toronto	V May, Miss G. A.	Toronto
*C MacDougall, W. J.	Toronto	C Mehr, L.	Toronto
C McFarlane, A. G. . .	Toronto	C Meiklejohn, A. B.	Harriston
C McFarlane, J. W. . .	Toronto	V Mellow, H. A.	Napanee
M McGahey, Miss E.	Toronto	C Menovitch, R. M.	Toronto
M McGarvey, Miss M. T.	Toronto	C Meredith, D. R. . .	Toronto
C McGill, C. M.	Toronto	C Merker, H. . . . .	Toronto
C McGillivray, G. A.	Whitby	T Mervynne, Miss M. E. R.,	Pasadena, Calif.
C MacGregor, D. C.	Toronto	C Miller, Miss M. E.	Warton
T McIntyre, Miss U. M.	Grand Valley	C Milliken, Miss M. A.	Toronto
C McKay, Miss L. F.	Warton	C Mills, A. M. . . .	Newmarket
T Mackenzie, A. L.	Toronto	C Mills, G. C. . . .	Toronto
V McKenzie, Miss S. M.	Leamington	V Mills, Miss M. A. . .	Merrickville
M McKewen, L. . . .	North Bay	C Mitchell, C. G.	Toronto
C Mackey, Miss N. G.	Ailsa Craig	V Mix, D. D.	Ottawa
M McKee, T. . . . .	Toronto	C Mode, M. H.	Scarboro Jct.
V McKim, Miss H. L. . .	St. Marys	C Moffatt, H. R.	Ottawa
T McKittrick, Miss C. M.	Toronto	V Monkman, R. J. . .	Toronto
C McLean, H. C.	Collingwood	V Moore, Miss G. S. . .	Campbellford
C MacLennan, Miss J. A.	Fort Frances	C Moore, T. F. . . .	Toronto
C McLeod, J. R. . . .	Toronto	C Morden, K. G.	Toronto
M McLogan, E. A. . .	Toronto	T Motoda, Miss H.	Tokyo, Japan
C McNairn, H. D. . .	Toronto	T Mudge, G. M. . . .	Toronto
C MacNamara, F. R.	Toronto	M Mueller, Miss V. E.	Hamilton
C Macnamara, Miss J. G.	Arnprior	M Muench, E. A.	Friendship, N.Y.
M Macnamara, Miss M.	Niagara Falls	C Munday, Miss T. B.	Toronto
C McNaughton, Miss D. E.	Toronto	V Mundy, Miss A. K.	Toronto
V McNeill, Miss J. H.	Bracebridge	M Mungovan, D. O.	Toronto
M McNicholl, A. J.	Toronto	C Murphy, Miss V. R.	Wardsville
C McNiven, Miss V. I.	Acton	V Mutart, S. R. . . .	Niagara Falls
T McPherson, J. M.	Collingwood	M Nelligan, Miss F. A.	Hamilton
C McTaggart, F. G.	Clinton	T Nicoll, C. W. I. . . .	Toronto
C MacTavish, L. R.	Toronto	M Nolan, Miss C. A. . .	Bradford
C MacVannel, Miss C.	St. Marys	C Norris, Miss M. E.	Toronto
C McVity, L. H.	Toronto	C Norton, Miss E. C. . . .	Toronto
C Mabee, C. E. . . .	Toronto	C Nunns, G.	Toronto
V Magee, F. G.	Toronto	M O'Brien, Miss A.	Toronto
V Mahoney, Miss A. I.	Keswick	C Oille, Miss G.	Sparta
M Mallon, J. F. . . .	Toronto	T Olver, Miss E. H. . . .	Toronto
C Mallon, N. F. . . .	Toronto	M O'Meara, Miss E. K. . .	Toronto
T Manbert, R. R.	Oakville	V Packham, G. S.	Toronto
C Mandell, S. H. . . .	Toronto	C Paget, Miss D.	Huntsville
V Manning, Miss J.	Toronto	C Pallett, Miss G. M.	Islington
C Marquis, Miss E. H.	Brantford	C Park, W.	Toronto
C Marshall, J. E.	Orangeville	C Parmenter, M. D.	Toronto
C Marshall, R. W. R.	Brampton	C Parry, Miss M. L. . .	Hamilton
V Mareton, Miss S. I.	Toronto	C Parsons, Miss E. M.	Toronto
C Martin, Miss R. R.	Goderich	C Paton, J. M. . . . .	Kincardine
V Mason, H. C. . . .	Regina, Sask.	C Peace, G. H. . . . .	Toronto
V Mason, W. G.	Toronto	C Peachey, E. H. . . . .	Toronto
C Matthews, J. B.	Weston	C Perkins, H. R. . . . .	Chatham

\*Michaelmas Term

†Easter Term.

College Name	Home Address	College Name	Home Address
C Perlove, J. . . . .	Toronto	V Service, G. R. ....	Stayner
C Phelps, Miss F. E. . . .	Toronto	V Service, R. J. . . .	Walkerville
C Plank, Miss H. E. . . . .	Toronto	V Shaw, Miss H. R. . . .	Toronto
*C Plaxton, H. A. R. ....	Toronto	M Sheehan, H. P. . . .	St. Catharines
C Plewes, F. B. . . . .	Toronto	C Sheppard, D. L. . . .	Toronto
C Plumptre, A. F. W. . . .	Toronto	M Sheppard, H. D. . . .	Sutton West
V Pottruff, J. L. . . . .	Paris	*C Sheridan, Miss A. I. .	Toronto
V Powell, Miss A. E. . . .	Toronto	V Shields, G. A. . . .	Innerkip
M Power, G. C. . . . .	Grand Falls, Nfld.	C Shier, M. R. . . . .	Toronto
C Powley, H. L. . . . .	Toronto	C Shuttleworth, Miss E. M. .	Toronto
M Primeau, C. A. . . . .	Toronto	C Silberstein, G. P. . . .	Rochester, N.Y.
C Procter, H. A. . . . .	Toronto	C Simmons, O. T. . . .	Courtland
C Pullan, G. . . . .	Toronto	V Simpson, Miss M. C. . .	Dundas
C Quance, G. D. . . . .	Delhi	C Smart, J. E. . . . .	Brampton
M Quinlan, Miss E. M. . .	Bairrie	V Smith, A. E. . . . .	Windsor
T Ralfe, R. D. . . . .	Toronto	V Smith, B. W. . . . .	Curries Crossing
T Reade, J. C. . . . .	Cowichan Sta., B.C.	V Smith, C. G. . . . .	Kitchener
V Redmond, Miss H. D. . .	Toronto	C Smith, Miss C. K. . . .	Toronto
V Redmond, Miss M. E. . .	Wingham	C Smith, Miss E. J. F. . .	Toronto
*C Reed, Miss N. K. . . .	Toronto	T Smith, G. E. F. . . .	Hamilton
C Reid, Miss A. F. . . . .	Brucefield	C Smith, G. M. G. . . .	Blenheim
C Reid, R. H. . . . .	London	C Smith, Miss H. G. . . .	Toronto
V Reinke, F. H. C. . . . .	Hamilton	C Smith, J. C. . . . .	Port Credit
*C Rendall, Miss I. S. . .	Fergus	*C Smith, Miss M. C. . .	Stratford
C Rennick, A. A. . . . .	Toronto	V Smith, Miss M. C. . .	Hickson
C Reynolds, Miss D. W. . .	Sudbury	V Smitherman, Miss M. L. .	Toronto
C Richards, Miss E. G. . .	Toronto	V Snell, Miss B. E. . . .	Atwood
C Richards, J. S. . . . .	Toronto	C Snider, Miss O. H. . . .	Toronto
V Richardson, Miss H. . .	Toronto	M Soleau, B. S. . . . .	Detroit, Mich.
	Rosetown, Sask.	C Solomon, S. E. . . . .	Toronto
V Ricker, Miss E. M. . . .	North Bay	C Soper, Miss A. T. . . .	Toronto
C Ridley, Miss R. . . . .	Toronto	C Soward, R. H. . . . .	Toronto
V Robertson, Miss L. E. . .	Iroquois	C Spalding, Miss E. G. W. .	Toronto
V Robson, D. O. . . . .	Toronto	V Spurling, Miss L. E. . . .	Toronto
C Rogers, A. L. . . . .	Tillsonburg	C Stanley, Miss E. M. . .	Toronto
C Rogers, Miss D. E. . . .	Toronto	V Stanley, Miss M. E. . .	Calgary, Alta.
V Rogers, Miss R. C. . . .	Toronto	C Starkman, M. . . . .	Acton
C Rose, F. M. . . . .	Toronto	C Stephens, D. S. . . . .	Hamilton
C Rose, J. W. . . . .	Toronto	V Stevenson, J. C. . . . .	Ottawa
C Ross, J. K. . . . .	Toronto	C Stevenson, Miss N. W. .	Toronto
M Rousselle, Miss M. . . .	Renfrew	C Stewart, G. L. . . . .	Toronto
C Rubin, Miss B. V. . . . .	Toronto	C Stewart, Miss M. E. . .	Seaforth
C Salmond, K. J. . . . .	Toronto	C Stewart, Miss M. T. . .	Toronto
V Sarjeant, T. R. . . . .	Orillia	C Stewart, R. W. . . . .	Fergus
C Scholes, Miss C. V. L. . .	Toronto	C St. John, J. C. . . . .	Toronto
C Scholfield, W. D. . . . .	Toronto	V St. John, J. S. . . . .	Uxbridge
C Schwartz, Miss F. . . . .	Toronto	V Stouffer, E. S. . . . .	Kitchener
M Scollard, P. D. . . . .	Peterborough	C Stringer, A. J. . . . .	Dawson, Y.T.
M Scollard, R. J. L. . . . .	Toronto	V Strong, Miss A. M. . . .	Toronto
C Scott, Miss E. C. . . . .	Toronto	C Strong, J. Q. . . . .	Weston
C Scott, Miss M. L. . . . .	Hollyrood	C Struthers, Miss M. M. .	Toronto
C Scott, Miss M. W. . . . .	Alliston	C Styles, D. A. . . . .	Brantford
C Scott, Miss S. I. . . . .	Toronto	C Supple, H. A. . . . .	Pembroke
M Seabrook, F. C. . . . .	Geneva, N.Y.	C Swartz, H. M. . . . .	Toronto
C Selznick, M. W. . . . .	Toronto	V Taber, Miss M. V. . . .	Athens

\*Michaelmas Term.



College Name	Home Address	College Name	Home Address
§V Taylor, A. R.	Woodstock	V Warren, E. V.	Weston
C Taylor, Miss E. I.	Toronto	C Warren, H. E. P.	Toronto
C Taylor, Miss H. E.	Orillia	C Waters, M. A. J.	Toronto
C Taylor, M. C.	Toronto	C Watkins, Miss I. R.	Norval Sta
C Taylor, N. A.	Toronto	C Watt, C. B.	Toronto
C Taylor, Miss V. M.	Woodstock	C Weaver, B. D.	Dunnville
C Teska, M. E.	Toronto	V Webb, Miss M.	Cookstown
V Thompson, Miss A. L.	Toronto	C Webster, Miss H. L.	Toronto
M Thompson, Miss M. M.	Toronto	C Webster, L. B.	Kenora
C Thompson, W. R.	Peterborough	C Weir, Miss H. E.	Toronto
V Thompson, W. W.	Hilton	V Wells, Miss M. A.	Islington
C Thomson, J. A.	St. Catharines	V Wells, Miss M. E.	Islington
C Thomson, J. E.	Hensall	V West, Miss E. K.	Almonte
T Todd, Miss H. A.	Kemptville	C White, Miss M. E. L.	Toronto
V Tolchard, Miss B. E. A.	Toronto	T White, Miss M. R.	Toronto
C Tow, D. K.	Toronto	C Wilkie, Miss M. M.	Toronto
C Towle, Miss D. E.	Toronto	C Wilkins, Miss M.	Toronto
V Tuck, Miss H. E.	Oakville	C Wilkinson, Miss R. E.	Toronto
V Tucker, A. W.	Toronto	C Willmott, Miss M. E.	Toronto
C Turner, Miss S. M.	Toronto	C Willson, Miss A. L.	Ridgetown
V Tyhurst, Miss E. M.	Regina, Sask.	C Wilson, C. W.	Toronto
C Tyson, Miss M.	Warton	V Wilson, R. V.	Toronto
V Uren, A. R. W.	Toronto	C Wishart, F. O.	Paris
**†C Ussher, Miss M. F.	Toronto	*C Withrow, Miss E. M.	Toronto
V Van Loon, G. I.	Brantford	V Wonnacott, Miss E. R.	Mt Brydges
C Vernon, Miss D. M.	Toronto	C Wood, Miss D. S.	Toronto
C Vila, H. M.	Hamilton	C Wood, Miss E. J.	Toronto
C Wade, R. C.	Weston	C Wood, Miss G. H.	Toronto
V Wagner, Miss M.	Kitchener	C Woodroffe, E. K.	Toronto
V Wales, Miss A. E.	Napanee	V Woods, N. J.	Watford
C Wales, Miss I. K.	Toronto	C Woodside, M. S. A.	Winnipeg, Man.
C Walker, D. J.	Toronto	C Woodworth, Miss C.	Toronto
C Walker, E. A.	Toronto	C Woolcombe, Miss W. D.	Godeich
C Walker, J. W.	Toronto	C Wright, C.	Toronto
T Walker, Miss M. O.	Bartonville	*C Wright, D.	Toronto
V Wallace, H. D.	Toronto	V Wright, H. E.	Toronto
C Wallace, Miss W. M.	Toronto	T Wright, J. A.	Amherstburg
C Wallace, W. P.	Toronto	M Wright, Miss M. T.	Toronto
V Walters, C. H.	Windsor	C Wrinch, Miss M. G.	Lambton Mills
T Walters, Miss E.	Kitchener	C Wynburne, V. B.	Glanworth
T Walters, Miss M. K.	Collingwood	C Wynd, R. M.	Tokyo, Japan
V Wansbrough, F. A.	Grand Valley	C Young, G. W.	Toronto
C Warnica, Miss J.	Painswick	V Young, Miss M. E.	Toronto
V Warren, C. A.	Weston	C Young, Miss M. J.	Scarborough Jet
C Warren, Miss E. B.	Toronto		

§Dispensation for Michaelmas Term.

†Easter Term

\*\*Duplicate Registration

\*Michaelmas Term.

## SUMMARY—FIRST YEAR

University College	420
Victoria College	154
Trinity College	55
St Michael's College	85
Duplicate Registration	1

## SECOND YEAR

C—University College, V—Victoria College; T—Trinity College;  
M—St Michael's College

College Name	Home Address	College Name	Home Address
C Abbott, Miss E. B.	Toronto	C Buchanan, N. S.	Toronto
V Addison, Miss M. C.	Toronto	C Bull W. L.	Weston
C Aggett, Miss K.	Toronto	C Burgess, J. L.	Orono
C Ainslie, G. S.	Comber	T Burgoyne, Miss L. G.	Grimsby
V Albright, H. R.	Toronto	C Burnett, W. W.	Elora
C Allen, J. F.	Georgetown	T Burns, Miss H. W.	Oshawa
C Anderson, J. M.	Wilton Grove	V Burrows, Miss I. A.	Toronto
C Anderson, Miss K.	Toronto	V Butchart, W. D.	Meaford
V Andrew, Miss L. I.	Toronto	C Butler, Miss M. E.	Penticton, B. C.
C Armour, I.	Oakville	M Can, Miss M. J.	Toronto
M Austin, J. E.	Pembroke	C Campbell, Miss G. V. A.	Toronto
T Ayre, H. G. M.	Toronto	C Campbell, J. C. A.	St. Catharines
C Baker, Miss A.	Chatham	C Campbell, Miss M. G.	Perth
C Bale, Miss E. G.	Toronto	C Carter, Miss E. M.	Guelph
V Bales, J. H.	Lansing	V Carver, Miss D. E.	Caledonia
C Barber, J. R.	Georgetown	C Cassidy, F. C.	Toronto
C Barker, Miss H. M.	Toronto	C Castell, A.	Toronto
C Barker, R.	Toronto	V Caswell, Miss E. C.	Toronto
V Barley, W. J.	St. Catharines	C Chambers, Miss M. A. C.	Woodstock
M Barthelmes, Miss K.	Toronto	V Chapman, W. M.	Uxbridge
V Bastedo, G. M.	Moose Jaw, Sask.	C Charles, A. F.	Toronto
§C Bayne, Robert A.	Newbury	V Chown, A. L.	Toronto
C Beath, T.	Oshawa	C Clark, Miss K. J.	Sarnia
C Beattie, Miss E. G.	Barrie	V Clarke, W. F.	Meaford
C Deauregard, Miss E. T.	Toronto	V Clements, Miss F. J.	Milton
C Beckett, T. R. B.	Kemptville	V Clements, J. H.	Elora
T Bell, Miss C. M. A.	Alliston	C Cohn, M. H.	Toronto
V Bell, W. M.	Ingersoll	T Coleman, Miss L. E.	Stoney Creek
C Bensley, E. H.	Toronto	V Coles, L. K.	Woodstock
C Benson, N.	Toronto	V Collier, H. B.	Toronto
V Berry, N. T.	Caledonia	V Collins, J. E.	Trenton
C Bird, W. E.	Hamilton	C Colter, Miss G. V.	Cayuga
V Blakeman, H. H.	Toronto	T Comber, Miss D. M. S.	Bobcaygeon
C Boake, Miss F. E.	Toronto	V Cook, I. D. A.	Simcoe
C Boles, Miss K. E.	Simcoe	V Cooke, Miss E. G.	Wolseley, Sask.
C Donwick, Miss F. E.	Oshawa	V Cooper, Miss O. L.	Goderich
C Borland, Miss E. M.	Toronto	T Corrigan, Miss B. M. H.	Toronto
V Bowles, Miss E. M.	Toronto	C Cosens, Miss E. H.	Toronto
C Bradburn, H. I.	Peterborough	V Cosh, Miss A. E.	Bobcaygeon
M Bradley, Miss M. L.	Farrellton, Que.	C Cowan, Miss J. A.	Barrie
V Bravener, Miss M. S.	Whitby	C Coyle, P. A.	Windsor
†M Brick, R. F.	Toronto	V Cragg, C. E. J.	Kobe, Japan
V Briggs, Miss R. M.	Port Credit	C Craw, W. B.	Fergus
V Brillinger, H. R.	Toronto	T Creegan, Miss M. E.	Deseronto
C Bristol, J. R. W.	Toronto	M Cronin, Miss C. A. C.	Toronto
V Broughton, Miss L. M.	Corbetton	V Crosby, H. M.	Uxbridge
V Brown, Miss E. A. T.	Kingsville	T Crosthwait, L. C.	Bancroft
C Brown, G. E.	Toronto	C Crozier, J. K.	Lethbridge, Alta.
C Brown, Miss I. A.	Toronto	V Cryderman, F. M. H.	Hampton
V Bryant, L. R.	Guelph		

§Dispensation for Michaelmas Term.

†Dispensation for Session.

College Name	Home Address	College Name	Home Address
C Dale, Miss M. R.	St. Mary's	C Garrow, J. T.	Toronto
C Dale, S. H.	Toronto	C Gibbons, Miss N. E.	Leamington
V Daly, F. S.	London	*M Giroux, W. A.	Peterborough
C Dandeneau, Miss D. B. L.	Toronto	†C Giroux, W. A.	Peterborough
C Davidge, Miss A.	Toronto	V Givins, W. M.	Regina, Sask.
C Davis, B. P.	Newmarket	C Glaister, Miss D.	Wellesley
C Davis, W. J.	Poplar	C Godwin, E. T.	Toronto
V Dawes, Miss R. A.	Toronto	C Goforth, J. F.	Honan, China
C Dayment, F. R.	Toronto	C Goldenberg, R. R.	Toronto
C Denton, F. D.	Niagara Falls	C Goldhar, S. N.	Toronto
T dePencier, M. T.	Kemptville	C Goldie, J. L.	Guelph
V Derby, W. R.	Hanover	C Golding, Miss A. N.	Toronto
V Dinsmore, K. M.	Toronto	C Goldstein, J.	Toronto
C Doan, Miss O. H.	Toronto	C Gollom, J.	Toronto
M Donohue, W. A.	Sarnia	C Gordon, Miss H. M. E.	Niagara Falls
C Dowkes, W. F.	Owen Sound	C Gourlay, D. E.	Toronto
V Down, H. J.	Oakland	C Graham, A. R.	Ottawa
V Doxsee, F. A. C.	Regina, Sask.	C Graham, D. M.	Toronto
V Doyle, A. M.	Toronto	C Granatstein, S. J.	Toronto
C Drummond, Miss M. E.	Toronto	C Green, H. P.	Toronto
V Drummond, O. L.	Toronto	C Griffiths, Miss P. M.	Toronto
V Duffton, J. F.	Stratford	C Grosart, A. H. G.	Toronto
C Dunkley, J. R.	Toronto	C Grossberg, B.	Kincardine
C Eakin, J. S.	Toronto	C Gunn, Miss L. J.	Toronto
*T Eastwood, Miss E. M.	Peterborough	V Hackett, W. T. G.	Tara
C Edmison, Miss H. L.	Toronto	M Haffey, H. J.	Welland
C Elliott, R. A.	Toronto	V Haller, M. C.	Hagersville
V Ellis, Miss H. F.	Winchester	M Hanley, J. G.	Shannonville
C Emery, J. A.	Stratford	C Harding, Miss D. F.	Toronto
V Endicott, Miss D. D.	Toronto	C Harlow, Miss E. B.	Toronto
C Evans, G. S.	Toronto	C Harris, C. G.	Niagara Falls
C Evans, J. F.	Toronto	T Harris, Miss I. G.	Oxford Mills
C Everitt, Miss C.	Toronto	M Harrison, Miss R. M.	Tamworth
V Everson, R. G.	Oshawa	C Harrison, Miss V. V.	St. Catharines
M Farrell, Miss E. P.	Niagara Falls	C Hartney, E. H.	Ottawa
C Farrell, Miss L. N.	Toronto	C Harvie, F. H.	Midland
C Faulds, Miss L. M.	Toronto	V Hawkins, R. H.	Port Hope
V Fenn, Miss B. E.	Bracebridge	V Hendershot, H. B.	Kingsville
C Ferguson, F. A.	Beeton	C Hershey, Miss A. D.	Toronto
V Fergusson, Miss E. K.	Elora	V Hewitt, A. G.	Kitchener
C Fine, A.	Toronto	C Hicks, Miss B. A.	Brantford
V Fleming, J. P.	Toronto	C Hickson, E. E.	Toronto
V Flindall, O. R.	Trenton	C Hill, Miss I. C.	Hartney, Man.
C Fockler, E. K.	Newmarket	C Hilliard, Miss A. M.	Kitchener
T Forrest, Miss M. M.	Port Hope	C Hilliard, D. G.	Kitchener
V Forsythe, B. C.	Uxbridge	C Hiltz, Miss M. R.	Toronto
V Foster, Miss C. L.	Waterloo	V Hodgins, Miss D. B.	Moosomin, Sask.
C Fraser, Miss F. E. H.	Toronto	C Hood, J. G.	Stayner
C Fraser, Miss J. I.	Pembroke	V Hopkins, W. I.	Burlington
C Fraser, R. O.	Hawkesbury	C Horning, E. L.	Toronto
M Fry, Miss E. L.	Niagara Falls	C Houser, Miss E. G.	Toronto
M Galimberti, G. M.	Toronto	V Houston, J. W.	Toronto

\*Michaelmas Term.

†Easter Term.

‡Dispensation for Session.

College Name	Home Address	College Name	Home Address
V Howard, Miss M. S.....	Whitby	C Lount, H. F. C	Toronto
C Hubbell, Miss C. A.	Smiths Falls	C Low, T. S.	Toronto
V Hurlburt, Miss H. G.	Barrie	V Luke, Miss E. F.	Toronto
IM Hutchison, C. F...	Toronto	C Lyon, Miss D.	Toronto
C Hutchison, F. F.	Toronto	C Lyon, F. M.	Toronto
V Hutchison, Miss M. B...	Bracebridge	C McBride, Miss L. E.	Smiths Falls
C Innes, R. T. L.	Simcoe	V McCallum, J. E.	Regina, Sask.
T Irvine, Miss H. G.	Orangeville	C McCormick, Miss D.	Pembroke
C Jackson, A. J.	Toronto	C McCrary, Miss A. M.	Alexandria, Va
V Jackson, Miss M. G....	Cardinal	T McCullagh, D. G.	Cobourg
*C Jennison, G. L.	Toronto	C McCutcheon, W. L.	Brussels
C Johnston, H. G.	Ottawa	C Macdonald, G.	Lewis, Scotland
V Johnston, Miss M. I...	Toronto	C McDonald, Miss G. E.	Toronto
C Jones, Miss M. E.	Toronto	C McDonnell, Miss E...	Toronto
C Jordan, Miss K. A.	Toronto	C McEachern, D. L.	Toronto
C Joyce, A. L.	Brantford	C McEvoy, Miss D. R.	Toronto
M Kavanagh, Miss N. F.	Ottawa	M McGarry, J. F.	Toronto
C Kay, Miss H. A. R.	Stratford	V McKay, B. M.	Toronto
C Keast, Miss A.	Toronto	V McKay, Miss D. J.	Bracebridge
C Keast, T. P.	Toronto	C McKay, Miss M. E.	Oshawa
V Keffer, J. W.	Hespeler	V McKay, Miss M. R.	Arnprior
C Keith, Miss M. G.	Toronto	C Mackenzie, Miss D. E.	Kincardine
C Kenny, W. E.	Orillia	C McKenzie, Miss R. J.	Toronto
C Kergin, F. G.	Pr. Rupert, B.C.	C McKie, G. J.	Simcoe
C Kergin, W. S.	Pr. Rupert, B.C.	V McKinley, Miss H. G.	Toronto
M Kerr, E. A.	Toronto	C McLaughlin, Miss A. J.	Hamilton
M Kerr, Miss H. M.	Toronto	C McLean, A. C.	Wallaceburg
V Kerr, J. G.	Toronto	C McLean, J. L. W.	Port Perry
C Ketchum, K. G. B.	Toronto	C MacLean, Miss S. M.	Corbetton
C King, C. M.	Toronto	C MacLennan, K. R.	Dundas
C King, F. G.	Cayuga	C McMahon, F. E.	Toronto
V Kingston, Miss D. A.	Campbellford	C MacMillan, C.	Lucknow
C Kinnear, H. W.	Toronto	V McMullen, Miss A. F.	Toronto
C Klotz, Miss J.	Ottawa	V McMullen, H. F.	Toronto
M Knowlton, W. L.	Toronto	C McMurray, L. M.	Ottawa
C Lalor, G. C.	Toronto	C McNaughton, Miss M. I.	Orangeville
V Lamont, Miss K. J.	Regina, Sask.	V MacPhee, Miss F. W.	New York City
C Langstaff, Miss H. C.	Richmond Hill	C McQueen, Miss V. E. M.	Tillsonburg
T Larsen, Miss N. M.	Katrine Station	C MacTaggart, Miss H. I.	Toronto
C Lawson, L. B.	Toronto	C McTavish, Miss M. C.	Windsor
C Laxton, Miss M. E.	Toronto	V Mabey, B. S.	Gananoque
M Lee, Miss A. F.	Toronto	C Mackie, T.	Toronto
V Lee, W. E. L.	Parry Sound	C Madorsky, Miss B.	Toronto
§V Leigh, D. M.	Locust Hill	V Magee, R. K.	Brampton
C Leigh, G. F.	Chapleau	V Mahoney, H. J.	Guelph
C Leizner, H.	Toronto	C Malcolmson, Miss M. L.	Barrie
V Lent, E. E.	Toronto	V Mann, W. E.	Brantford
C Levy, Miss B.	Toronto	V Marchant, W. T.	Toronto
V Lewis, Miss M. D.	Smiths Falls	V Marriott, Miss R. H.	St. Marys
V Liddy, J. E.	Orangeville	C Marrs, L. E.	Toronto
V Lockwood, W. W.	Victoria, B.C.		
M Long, Miss H. M.	Whitby		
C Lorenzen, F.	St. Catharines		

\*Michaelmas Term.

§Dispensation for Michaelmas Term.

‡Dispensation for Session

College Name	Home Address	College Name	Home Address
V Marshall, Miss F. A	Toronto	C Procter, Miss L. R.	Toronto
V Mason, L. M. C.	Bowmanville	V Pugh, Miss I. E.	Whitevale
V Massey, Miss R. E.	Kingsville	C Purvis, C. J.	Essex
T Matheson, Miss G. J.	Ottawa	C Radcliffe, N. D.	Toronto
C Matthews, F. B.	Toronto	T Ralfe, G. W.	Toronto
C Medcalf, G. C.	Ottawa	C Ramsden, Miss M. C.	Grimsby
C Menzies, Miss B. E.	Toronto	C Raney, A. S.	Orillia
C Meretsky, M.	Windsor	C Reeves, Miss J. A.	Fort Frances
V Miller, G. W.	Markham	T Reid, E. M.	Toronto
C Mills, Miss E. M.	Toronto	V Reid, Miss J. A.	Toronto
V Millsap, Miss J. E.	Creemore	V Risdon, F. G.	Granton
C Minsky, J.	Toronto	C Risk, J. C.	Toronto
V Miscner, C. C.	Welland	V Rittenhouse, Miss A.	Vineland Sta.
C Mitchell, S.	Toronto	M Rivers, Miss E. A.	Bogart
C Monds, Miss H. C.	Petrolia	†M Roach, Miss M. G.	Hamilton
V Mooney, Miss F. C. E.	Regina, Sask.	C Robertson, F. W.	Toronto
C Moore, Miss F. M.	Toronto	C Robertson, O. A.	Ida
V Moore, J. B.	Toronto	C Robertson, S.	Milton
C Morrison, C. R.	Toronto	C Robinson, G. deB.	Toronto
C Muir, P.	Toronto	V Robinson, Miss G. O.	Guelph
M Murphy, N. J.	Toronto	V Robinson, Miss M. P.	New Toronto
C Murray, Miss F. B.	Toronto	C Roos, K. O.	Toronto
V Murray, Miss J. A.	Collingwood	C Root, Miss F. M.	Dunnville
C Murray, Miss M. I. S.	Toronto	C Ross, Miss A. H.	Barrie
V Murray, Miss M. M.	Collingwood	C Ross, C. J. F.	Toronto
M Muirhead, Miss M.	Toronto	C Ruddock, J. Y.	Toronto
C Myers, C. R.	Toronto	C Rugg, Miss M. E.	Toronto
C Nesbitt, W. R.	Toronto	C Samuels, L. S.	Toronto
V Nicholas, M. A.	Toronto	C Satterly, J.	Toronto
T Nind, P. H. M.	Toronto	C Saunders, Miss J. E.	Weston
C Nixon, Miss M. L.	St. John, N.B.	V Saywell, H. A.	Toronto
V Norman, W. H. N.	Mitchell	M Scandiffo, N. A. F.	Toronto
V Nourse, Miss D. E.	Toronto	C Scholfield, G. P.	Toronto
M O'Connor, Miss D. M.	Sault Ste Marie	C Scott, G. W.	Toronto
V Ogden, Miss C. I.	Unionville	C Scott, Miss L. I.	Toronto
M O'Keefe, Miss C.	Toronto	C Servais, C. J.	Port Arthur
M O'Keefe, C.	Vernon, B.C.	C Sewell, W. S.	Toronto
C O'Reilly, Miss H.	Toronto	C Shapiro, I.	Toronto
C Page, Miss D. R.	Toronto	C Sharpe, H. L.	Orillia
†V Panabaker, W. C.	Lampman, Sask.	V Shaver, Miss A. M.	Ancaster
C Park, Miss A. G.	Toronto	V Shaver, Miss D. M.	Brockville
T Parker, Miss A. V.	Bowmanville	C Shaw, H. V.	Toronto
C Parks, A. E.	Toronto	C Shaw, Miss M. M.	Toronto
C Peachey, C. A.	Toronto	M Sheehan, Miss M. R.	Springfield, Mass.
V Pearl, Miss L. C.	St. Mary's	C Sherman, H. H.	Toronto
C Pierdon, Miss I. H.	Toronto	C Shute, W. E.	Windsor
C Plaunt, A. B.	Ottawa	§C. Siegel, Miss R.	Toronto
C Plewes, Miss L. W.	Toronto	V Sifton, S. C.	Moose Jaw, Sask.
C Pocock, L. V.	Brockville	V Simpson, G. T.	Moffat
V Potter, Miss E. V.	Toronto	C Singer, L. A.	Toronto
†M Powell, T. S.	Toronto	C Singlehurst, J. H.	Oakville
V Price, C. B.	Newburgh	C Smith, B. L.	Toronto
		C Smith, E. H.	St. Catharines

†Dispensation for Session.

§Dispensation for Michaelmas Term.

College Name	Home Address	College Name	Home Address
C Smith, Miss G. A.	Lansing	C Thompson, Miss M. E.	Toronto
C Smith, J. F.	Toronto	V Thompson, W. F.	Toronto
M Smith, Miss M. D.	Toronto	C Thomson, B. J.	Toronto
C Smith, Miss M. R.	Lansing	T Thornton Fell, J. N.	Victoria, B.C.
T Smith, W. F. R.	Fort Erie	V Tidman, Miss V. M.	Toronto
T Smith, W. L.	Kingsville	V Tow, Miss M. C.	Toronto
V Smitherman, A. J.	Jarvis	C Tucker, Miss L. E.	Toronto
V Snyder, G. A.	Niagara Falls	C Tudhope, Miss L. F.	Orillia
C Snyder, K.	St Jacobs	C Turnbull, A. R.	Seaforth
C Somerville, C. R.	London	C Turnbull, Miss M. I.	Galt
C Somerville, Miss M. W.	Orono	T Turnbull, R.	Niagara Falls, N.Y.
V Soward, H. G.	Toronto	C Upshall, W. G.	Toronto
V Sparham, C. E.	Caledonia	C Varty, J. A.	Markdale
C Spence, K. D. M.	Toronto	V Vernon, E. G.	Uxbridge
V Spooner, R. C.	Toronto	C Vetter, Miss V. C.	Toronto
C Stacey, C. P.	Toronto	C Waines, Miss M. M.	Toronto
V Stafford, W. I.	Aylmer, Que.	C Walker, R. B.	Toronto
C Stanbury, W. S.	Exeter	V Walton, Miss M. E.	Toronto
C Standeven, Miss T. J.	St Marys	C Waring, Miss E. A.	Toronto
C Steinhauer, H.	Toronto	C Watson, Miss E. H.	Thornhill
C Steiss, E. A.	Heidelberg	V Wattie, Miss D. E.	Bracebridge
V Sterling, J. E. W.	Cedar Springs	C Weil, Miss S.	Toronto
C Stevenson, Miss S. J.	Toronto	C Weir, Miss N. V.	Toronto
C Stewart, Miss B. E.	Norwich	C West, J. K.	Dunnville
T Stewart, C. D.	Barrie	C Weston, Miss A. F.	Toronto
V Stewart, Miss J.	Toronto	V White, Miss H. I.	Toronto
C Stewart, J. H.	Springfield	C Wicks, C. A.	Weston
C Stewart, M. T.	Wingham	C Wickware, Miss H. M.	Smith's Falls
C Stinson, Miss F. M.	Toronto	M Wiley, Miss N.	Weston
C Stirrett, Miss M. M.	Sarnia	C Willard, Miss E. A.	Toronto
C Stollery, C. W.	Toronto	V Williams, A. F.	Sunderland
C Stollery, F. H.	Toronto	V Willmott, R. O.	Strathroy
V Stone, Miss D. C.	Toronto	T Wills, Miss N. I.	Jordan
C Sugar, L.	Toronto	C Wilson, D. J.	Brantford
T Sugden, F. J.	Paris	V Wilson, D. J.	Toronto
C Sullivan, Miss F. E.	Stayner	V Wilson, Miss E. B.	Haileybury
C Sullivan, G. F.	St. Catharines	V Wiltse, Miss F. I.	Athens
M Sullivan, P. B.	Toronto	C Wishart, G. A.	Paris
C Sutherland, Miss F. H.	Petrolia	V Wonnacott, H. G.	Mt. Brydges
V Taber, R. J.	Athens	T Woods, W. G. B.	Listowel
V Thom, S. D.	Regina, Sask.	C Worsley, C. P.	Toronto
M Thompson, G. J.	Teeswater	M Young, Miss E.	Ennismore
C Thompson, Miss M. A. J.	Havelock		

## SUMMARY—SECOND YEAR

University College	285
Victoria College	145
Trinity College	29
St. Michael's College	36
Duplicate Registration	1

## THIRD YEAR

C—University College, V—Victoria College, T—Trinity College;  
M—St Michael's College

College Name	Home Address	College Name	Home Address
V Adams, Miss M. E. H.	Toronto	C Bronstein, Miss R. G.	Toronto
V Aikens, Miss W. G.	Grimsby East	C Brown, E. K.	Toronto
C Alderson, G. K. D.	Ingersoll	T Brown, Miss M. E.	Napanee
C Allen, K. E.	St Catharines	C Brown, O.	Toronto
V Allen, Miss L. H.	Toronto	V Bruce, Miss L. S. B.	Stouffville
C Allin, Miss E. J.	Blackwater	C Bullen, Miss V. E.	Toronto
M Andary, Miss H. C.	Sault Ste. Marie, Mich	M Burcher, Miss M. L.	Toronto
C Anderson, Miss R. M.	Toronto	C Burford, Miss H. K.	Toronto
C Anderson, W.	Toronto	C Burgess, E. H.	Norwood
V Anghin, Miss R. W.	Toronto	C Burgess, F. A.	Toronto
C Appelbe, Miss M. R.	Toronto	C Burk, J. D.	Toronto
C Archibald, A. E.	Seaforth	V Burns, Miss K. C.	Toronto
C Armstrong, J. W.	Allandale	C Burton, Miss D. F.	Toronto
C Armstrong, P. T.	Toronto	V Butcher, Miss D. E.	Toronto
V Armstrong, R. H.	Orono	C Caldwell, Miss J. K.	Toronto
C Arnold, Miss K. J.	Toronto	M Callaghan, R. F.	Hamilton
C Atkinson, J. S.	Toronto	C Campbell, C. M.	Toronto
C Aziz, S. A.	Toronto	C Campbell, Miss M. D.	Ripley
V Bailey, Miss M. A. M.	Lakefield	C Campbell, N. M.	Toronto
C Bain, Miss B.	Toronto	V Cannom, Miss L. V. R.	Cobourg
V Balkwill, Miss M. E.	Kingsville	M Carroll, Miss M. E.	Hamilton
C Ball, Miss K. L.	Toronto	C Carroll, W. R.	Iona Station
V Bannerman, G. F.	Toronto	T Catchpole, D. S.	Toronto
V Barker, Miss M. G.	St Catharines	C Catzman, F.	Toronto
V Baxter, C. A.	Thamesville	T Chaffe, R. S. S.	Waterdown
V Beal, Miss I. C.	Toronto	T Charleson, E. H.	Ottawa
T Beaumont, Miss E.	Glen Williams	C Chesnut, Miss H. I.	St. Catharines
C Beck, J. S. H.	Brampton	V Chisholm, R. F.	Toronto
V Becker, R. P.	Toronto	C Ciglen, S.	Toronto
V Bennett, Miss S. M.	Streetsville	C Clark, Miss M. M.	Toronto
V Bernhardt, K. S.	Walkerville	C Clayton, L. H.	Ottawa
M Berrigan, T. J.	Pembroke	C Cole, A. F. W.	New Liskeard
C Biggar, G. F.	Toronto	C Coleman, E.	Hamilton
T Bissett, H. M.	Windsor, N.S.	C Coleman, H. R.	St. John, N.B.
C Black, Miss M. A. B.	Almonte	C Conn, Miss J. B.	Sarnia
V Blair, H. K.	North Gower	C Cook, G. N.	Toronto
V Blair, J. W. K.	Arthur	M Cooney, Miss M. G.	St. Catharines
M Blake, Miss P. M.	Toronto	C Copus, Miss M. A.	Stratford
M Bolan, M. J.	Toronto	T Costigan, E. H.	Toronto
C Boles, T. Z.	Simcoe	M Coughlin, Miss M. W.	Toronto
C Borsook, L.	Toronto	M Coumans, Miss C. C.	Chepstowe
T Bradley, J. H.	Niagara Falls	C Cox, G. O.	Palmerston
C Bradshaw, Miss H. C.	Toronto	C Craw, Miss M. W.	Toronto
C Brandon, Miss D. H.	Toronto	V Creighton, Miss M. I.	Toronto
C Bray, G. M.	Kitchener	C Crighton, H. H.	Toronto
C Brayley, Miss M. E.	Hamilton	M Crumney, Miss M.	Toronto
V Breeze, W. S. W.	Chatsworth	V Cummings, Miss J. M. L.	Toronto
V Brethen, Miss R. K.	Norwood	C Cuthbertson, F. W.	Toronto
T Brett, Miss E. B.	Rosemont	V Daly, Miss B. M.	London
V Brett, Miss H. O.	Steenburg	C Dalziel, Miss J. M.	Woodbridge
C Brock, Miss C. B. G.	Winnipeg, Man.	T Davis, Miss A. M.	Hamilton
		C Davis, K. F.	Toronto
		T Daw, W. H.	Hamilton

College Name	Home Address	College Name	Home Address
V Deacon, K. E. . . . .	Toronto	C Gibson, Miss J. I. . . . .	Toronto
V Deck, J. M. . . . .	Lakefield	V Goodison, J. E. . . . .	Sarnia
M Dell, Miss G. A. . . . .	Hamilton	M Gormaly, Miss C. . . . .	Chicago, Ill
C Detweiler, Miss I. . . . .	Sault Ste Marie	C Graburn, A. L. . . . .	Toronto
T Dick, Miss M. E. . . . .	Milton	C Graham, Miss G. R. . . . .	Belleville
C Dickinson, Miss J. S. . . . .	Niagara Falls	V Graham, J. E. . . . .	Toronto
C Digby, G. S. . . . .	Toronto	V Graham, W. H. . . . .	St. Mary's
V Dingwall, R. M. . . . .	Priceville	C Grant, D. H. . . . .	Toronto
C Doherty, B. W. . . . .	Toronto	C Gray, Miss M. E. . . . .	Toronto
C Dole, Miss D. . . . .	Toronto	V Graydon, Miss A. E. . . . .	Toronto
C Donnell, A. A. . . . .	Galt	C Green, W. H. W. . . . .	Toronto
*C Donnelly, A. J. . . . .	Pinkerton	C Grier, J. C. . . . .	Owen Sound
C Douglas, J. F. R. . . . .	Toronto	V Griffin, Miss E. . . . .	Cannington
M Doyle, Miss C. A. . . . .	Dundas	C Gringorten, I. M. . . . .	Toronto
V Drewry, Miss N. O. . . . .	Chatham	V Haines, Miss R. W. . . . .	Newmarket
C Duff, D. C. B. . . . .	Toronto	C Haley, Miss M. E. . . . .	Toronto
V Duff, G. L. . . . .	Hamilton	V Hall, C. H. . . . .	Toronto
M Duffy, F. G. . . . .	Hamilton	C Hall, H. G. . . . .	Toronto
M Duffy, Miss G. N. . . . .	Hamilton	V Hall, N. H. . . . .	Guelph
M Duggan, C. J. . . . .	Ottawa	C Hall, W. A. C. . . . .	Oshawa
M Duggan, Miss L. C. . . . .	Toronto	C Halliday, D. M. . . . .	Chesley
M Dwyer, Miss M. . . . .	Toronto	V Hames, G. H. . . . .	Oxbow, Sask
V Eadie, Miss F. P. . . . .	Scotland	C Hamilton, Miss A. M. B. . . . .	Toronto
C Earle, W. E. . . . .	St. John, N.B.	M Hamilton, B. J. . . . .	Owen Sound
V Elliott, Miss D. E. . . . .	Toronto	V Hamilton, K. L. . . . .	Londesborough
V Ellis, Miss A. M. M. . . . .	Gananoque	V Hanna, Miss M. W. . . . .	Port Carling
*M Enright, C. T. . . . .	Toronto	M Hannah, W. H. . . . .	Hamilton
C Fawcett, D. F. . . . .	Winnipeg, Man	V Hanson, Miss N. L. . . . .	Dixon Corners
V Fennell, V. . . . .	Havelock	M Harrigan, B. W. . . . .	Hamilton
C Ferguson, Miss L. E. . . . .	China	V Harris, C. . . . .	Brantford
V Ferguson, W. M. . . . .	Toronto	V Harris, H. E. . . . .	Hamilton
V Fife, Miss J. H. G. . . . .	Toronto	C Harris, L. J. . . . .	Toronto
C Findlay, G. E. . . . .	Carleton Place	C Harris, Miss M. C. . . . .	Port Perry
C Fineman, L. . . . .	Toronto	C Hartwick, Miss M. K. . . . .	Toronto
C Finkelman, J. . . . .	Hamilton	C Hawke, E. E. . . . .	Toronto
M Flahiff, G. B. . . . .	Paris	V Hazlewood, Miss R. M. . . . .	Gimsby
V Fletcher, Miss I. P. . . . .	Toronto	C Helper, Miss M. . . . .	Toronto
V Fletcher, W. G. . . . .	Toronto	V Henderson, Miss M. M. . . . .	Waterloo
M Foley, Miss M. E. . . . .	Toronto	C Hillary, A. T. . . . .	Toronto
V Forward, Miss D. F. . . . .	Ottawa	V Hilliard, Miss G. M. . . . .	Waterloo
C Francis, L. L. . . . .	Toronto	V Hipwell, Miss A. P. . . . .	Alliston
T Frank, C. J. . . . .	Toronto	C Hodges, Miss W. M. . . . .	Dundas
C Fraser, Miss C. C. . . . .	Toronto	C Hodgetts, Miss A. M. . . . .	Clarkson
C Fraser, C. C. . . . .	Glen Sandfield	C Hoffman, Miss E. . . . .	Toronto
C Fraser, C. G. . . . .	Toronto	C Hogg, F. S. . . . .	Preston
V Fulton, R. B. . . . .	Lindsay	V Hollinrake, A. F. . . . .	Hamilton
C Galbraith, Miss M. . . . .	Milton	V Honey, Miss M. E. . . . .	Lynden
C Galvin, Miss N. M. . . . .	Toronto	V Horton, Miss M. E. . . . .	Toronto
C Gardiner, Miss D. J. . . . .	Cornwall	V Horwood, W. P. . . . .	Toronto
C Garrett, D. R. . . . .	Toronto	V Hubbert, Miss R. E. . . . .	Toronto
C Garvin, J. B. . . . .	Sydenham	C Hudson, Miss E. S. . . . .	Preston
C Gemmill, J. S. . . . .	Toronto	C Huff, Miss D. M. . . . .	Toronto
C Gerrie, W. . . . .	Brantford	V Hughson, Miss M. . . . .	Hamilton
C Gibb, W. K. . . . .	Toronto	V Irving, J. A. . . . .	Drumbo
C Gibbs, F. H. . . . .	Ramsgate, Eng	V Irwin, Miss A. W. . . . .	Moose Jaw, Sask

\*Michaelmas Term.



College Name	Home Address	College Name	Home Address
V Irwin, Miss H M	Campbellford	C Macdonald, J. K	Toronto
C Iscovitz, A.	Toronto	C McDonald, Miss M C M	Sutton West
T Ives, L. M	Belleville	C Macdonald, Miss M. J.	Acton
V Jackson, Miss E. E	Toronto	C McDonald, W. E.	Glencoe
C Jackson, Miss I. G.	Toronto	C McDougall, D J	Toronto
V Jameson, Miss L. I.	Toronto	C MacEachern, F	Eldon
T Jones, H. F	Orillia	C McElroy, Miss E. L	Ottawa
T Jennings, W. B.	Penetanguishene	M McEnaney, V. X	Toronto
C Johnson, Miss K.	Toronto	C McFarlane, N.	Hamilton
C Johnston, Miss H G	Toronto	C MacGillivray, J. R	Guelph
C Johnston, M	Collingwood	C McIntosh, Miss E. M	St Catharines
C Johnston, R. W S	Toronto	V McJannet, Miss E. D.	Gravenhurst
C Jones, W. A	Toronto	C McKay, Miss J. E	Port Arthur
M Kane, J. P	Vancouver, B.C	C McKeever, Miss B. M.	Ottawa
C Kaplan, M	Toronto	C McKenzie, A	Galt
C Karn, Miss M. T	Woodstock	V McKenzie, D W.	Major, Sask
C Keighley, G. L.	Pembroke	M McKeon, J. E	Windsor
C Kells, Miss D G	Toronto	C McLaughlin, Miss E. R	Toronto
M Kelly, J. F	Chatsworth	C MacLean, L. A. B.	Bradford
C Kendell, G. D. F	Dundalk	C MacLellan, Miss M. J	Claremont
M Kernahan, Miss H. M	Toronto	M McManamy, J P	Thorold
C Kernohan, Miss D. A. S	Toronto	M McManamy, T. V	Thorold
V Kincaide, Miss F. M	Unionville	C McMullen, Miss G. E	Midland
C King, B. B	Toronto	C McNabb, Miss A. E	Belmont
M Kingsley, Miss N	Lindsay	C MacRostie, Miss A. C	Brampton
T Kinnear, Miss M. H	Oshawa	V Maas, Miss D.	Toronto
V Kirkland, Miss J.	Hamilton	C Malcolm, Miss J. L. C	St. George
C Knowles, Miss B. W	Sarnia	V Manuel, J	Sault Ste. Marie
V Knox, Miss M. E	Orono	C Martin, Miss A. M	Chatham
C Krug, C. A	Chesley	M Martin, B. J	Toronto
C Laborde, Miss M. C.	Brantford	T Martin, Miss M. M	Milton
V Laidman Miss M. E	Barrie	C Martyn, Miss M. M	Ripley
C Lane, R. W	Halifax, N.S	V Mathers, G. S	Weyburn, Sask
C Latchford, J. S	Toronto	C Matthews, Miss H. R.	Weston
V Lavell, Miss M. M	Toronto	C Messervy, R. B	Charlottetown, P.E.I.
C Lavine, A.	Toronto	V Mews, Miss O. F	St. John's, Nfld
C Lea, C. A.	Toronto	C Michalson, Miss E	Toronto
C Lec, E. P	Toronto	M Mitchell, Miss V	Toronto
T Lee, Miss M. J	Goderich	V Middleton, A. H	Toronto
C Legge, Miss M. I	Toronto	C Millar, B. S.	Woodstock
V Lambert, W. H	Toronto	C Mills, W. J. P	Toronto
C Lockie, Miss I. M	Zephyr	C Milne, W. S	Toronto
C Logie, Miss J. D	Paris	C Mitchell, Miss A. L	Drumbo
C Lowden, J. A	Toronto	V Mitchell, Miss E. G	St Mary's
V Luke, Miss S. M	Toronto	C Mitchell, G. C	Flesherton
T Luxton, Miss A. W	Toronto	C Mitchell, J. H	Toronto
	Victoria, B.C.	C Mitchell, R. C. H	Hamilton
M Lyons, W. J	Ottawa	C Monk, Miss A. M	Ottawa
C Macarthur, W. G	Stayner	T Moore, Miss M. H.	Toronto
M McCarthy, Miss E. M.	Windsor	V Morrison, Miss E. E.	Petrolia
M McCarthy, Miss H. J.	Dixie	T Morrison, W. K.	Richwood
C McConkey, N. R	Stratford	C Morrow, Miss D. B.	Toronto
C McCready, Miss M. S	Toronto		
V McCutcheon, M. W	Toronto		
V McDonald, C. J	Toronto		

†Dispensation for Session.

College Name	Home Address	College Name	Home Address
C Moulton, C. A. ...	Toronto	C Rabow, M. ...	Toronto
C Mowat, Miss J. I. ...	Acton	C Rac, Miss C. M. ....	Toronto
C Mowat, Miss M. C. ....	Acton	†C Rankin, W. M. ...	Toronto
V Munro, Miss H. J. ....	Iroquois	C Rawson, D. S. ...	Goodwood
C Murray, J. R. ...	Toronto	C Rawson, G. H. ...	Toronto
C Nanton, P. C. ...	Winnipeg, Man	V Reid, Miss H. M. ...	Belleville
C Needler, A. W. H. ...	Toronto	C Ritchie, Miss J. H. ...	Toronto
C Needler, Miss W. E. ...	Toronto	C Robertson, W. H. ...	Toronto
M Nelligan, Miss E. M. ...	Toronto	C Robinette, J. J. ...	Toronto
C Nesbitt, Miss C. L. A. .	Toronto	C Robinson, W. E. ...	Toronto
C Ness, Miss M. E. ...	Ottawa	C Rogers, K. H. ...	Winnipeg, Man
C Nethery, L. ...	Columbus, Ohio	C Roos, Miss H. C. .	Waterloo
C Nettleton, Miss W. ...	Toronto	C Roos, Miss K. A. .	Kitchener
C Newby, M. F. ...	Toronto	C Ross, Miss D. E. .	Brussels
M Neylan, F. E. ...	Midland	C Rossman, I. M. ....	Toronto
M Noonan, J. E. ...	Mt. Forest	C Rotenberg, Miss H. ...	Toronto
V Oaks, Miss I. M. ...	Pieston	C Rotenberg, Miss R. ...	Toronto
M O'Donnell, B. ...	Bathurst, N.B.	M Ruth, F. S. ...	Toronto
M O'Grady, Miss R. F. .	Toronto	C Sadowski, Miss E. ...	Toronto
M O'Leary, M. N. ...	Toronto	V Sandy, Miss D. A. ...	Omeme
C Orloff, H. ...	Toronto	C Schon, W. B. ...	Halifax, N.S.
C Orr, Miss E. J. ...	Toronto	C Scott, A. C. ...	Toronto
V Outwater, Miss M. ...	Mimico Beach	V Scott, Miss M. M. ...	Ingersoll
C Page, R. R. H. ....	Toronto	C Scott, Miss O. J. ...	Toronto
C Pallett, Miss S. B. ....	Islington	C Selby, D. L. ...	Simcoe
T Palmer, C. N. Charlottetown, P.E.I.		V Service, Miss E. W. ...	Szechuan, W. China
V Parker, Miss J. A. ...	Humberside	M Sharpe, Miss M. ...	Toronto
V Partridge, Miss E. E. ...	London	C Shaver, K. J. ...	Toronto
C Partridge, Miss O. M. .	Guelph	C Shaw, Miss E. B. ...	Guelph
V Patterson, C. S. ....	Toronto	C Shell, Miss L. N. M. ...	Sault Ste. Marie
C Patterson, J. G. ...	Ottawa	*C Sheppard, Miss D. A. ...	Aurora
C Pattison, Miss I. E. ...	Toronto	C Sher, D. ...	Toronto
C Payne, J. D. ....	Welland	C Shiell, Miss D. N. ....	Toronto
V Peacock, E. R. ....	Lansing	C Shifrin, A. ...	Toronto
C Pepper, A. E. ...	Prescott	M Silvester, Miss R. A. ....	Toronto
V Perkin, L. L. ....	Toronto	C Sims, Miss E. ...	Thustletown
C Perrie, D. K. ....	Wingham	V Sine, Miss P. L. ...	Gananoque
C Perrott, Miss L. S. ...	Alliston	V Skinner, Miss A. K. .	Simcoe
V Perry, A. E. ...	Niagara Falls, N.Y.	C Smart, Miss D. A. ...	Toronto
M Phelan, Miss M. J. ...	Guelph	C Smart, J. D. ...	Brampton
V Philp, W. R. ...	Colborne	C Smeaton, Miss W. H. Niagara Falls	
C Pidgon, A. L. ...	Toronto	C Smith, E. G. ...	Pembroke
V Pinder, Miss M. M. ...	Arthur	V Smith, Miss E. M. ...	Toronto
C Plaxton, H. J. ...	Toronto	C Smith, Miss H. S. ..	St Catharines
C Pole, E. A. ...	Hot Springs, Va	C Smith, L. A. ...	Uxbridge
T Prewer, Miss A. E. ...	Sudbury	V Smith, Miss R. N. Moosc Jaw, Sask	
T Pringle, C. C. D. ...	Prescott	†C Sneddon, H. R. ...	Toronto
C Pritchard, A. L. ...	Toronto	C Speirs, N. R. ...	Toronto
C Procter, A. E. ....	Toronto	V Spencer, Miss M. J. Vancouver, B.C.	
C Pusitz, M. ...	Toronto	C Stark, H. A. ...	Toronto
V Pyne, C. E. ...	Toronto	V Starr, Miss M. A. E. ...	Toronto
M Quinlan, Miss G. J. ....	Port Hope		
C Rabinowitch, J. ...	Toronto		

†Dispensation for Easter Term.

\*Michaelmas Term.

†Dispensation for Session.

College Name	Home Address	College Name	Home Address
C Steele, Miss S. M.	Amherst, N S	C Waddell, W. L. M	Ballinafad
C Stern, Miss B	Toronto	C Walerstein, I.	Toronto
V Stewart, C. M	Regina, Sask	V Wales, Miss M. E	Napanee
C Stewart, Miss J. C.	Shawville, Que	V Walker, Miss E. I	Barrie
C Stirling, Miss J. M	Agincourt	T Walker, R. P	Toronto
C Striver, Miss D. A	Unionville	T Wallace, Miss H. B	Napanee
M Story, Miss N. C	Guelph	C Ward, A. B	Hamilton
V Strangeways, F. B.	Toronto	C Waring, Miss M. K	Toronto
M Sullivan, C. W	Toronto	C Warren, C. M	Toronto
M Sullivan, Miss D. H	Toronto	C Watkins, J. B. C	Norval Sta
C Sutton, Miss E. E	Toronto	M Watson, G. D	Toronto
T Symons, D. M	Toronto	C Watson, H. G. I	Stratford
M Tallon, W. F	Cornwall	V Watson, K. P.	Sarnia
C Taplin, Miss M. A	Toronto	C Watt, H. N	Palmerston
C Taube, L	Toronto	V Waugh, F. D. R	Toronto
V Taylor, Miss A.	Toronto	T Waugh, W. H	Niagara Falls
C Taylor, H. M	Bracebridge	C Weber, J. J	Toronto
T Taylor, T. H	Hamilton	V Webster, S. D. L	Little Britain
C Taylor, W. S	Toronto	V Wegenast, Miss I. S	Waterloo
C Teskey, Miss M	Oakville	C Weir, Miss N. P	Toronto
C Thompson, A. C	Toronto	C Weiss, H. J	Toronto
T Thompson, Miss M. E.	Almonte	V West, Miss E. M	Almonte
C Thomson, J	Dobbinston	V Westman, Miss M. E	Toronto
C Thurston, Miss R. Port	Moody, B C	M Wickett, Miss I. J	Toronto
C Todd, N. A	Hamilton	C Wickware, Miss H. S.	Port Credit
C Toole, H. A	Port Dover	M Wilbur, G. H	Bathurst, N.B.
C Tory, J. M	Toronto	C Wilcox, J. E	Toronto
C Traynor, T. R	Owen Sound	C Wilkins, Miss J	Toronto
V Tremaine, Miss A. M	Toronto	C Willard, R. H	Hamilton
C Turnbull, Miss J. F	Galt	V Williams, Miss K. M.	Woodstock
C Turner, H. A	Fergus	V Williamson, F	Toronto
V Turner, T. R.	Walkerville	V Wilson, Miss C. E	Toronto
*C Turner, W. R	Fergus	T Wilson, D	Oakville
C Tustin, Miss E. A	Toronto	T Wilson, Miss D. F. N	Tilbury
C Utting, Miss A. K	Woodstock	V Wilson, E. H	Toronto
V Van Allen, Miss M. M.	Morrisburg	V Wilson, K. R	Brantford
C Van Every, W. A. T.	Toronto	V Wood, B. F.	Prince Albert, Sask.
C Vanstone, E. M.	Toronto	C Woods, J. F	Toronto
C Van Valkenburg, R.	Toronto	C Wright, Miss D. H	St. Mary's
C Verity, Miss H. E.	Brantford	M Wright, Miss M. C	Toronto

\*Michaelmas Term.

### SUMMARY—THIRD YEAR

University College	283
Victoria College	131
Trinity College	33
St. Michael's College	57
Total	504

## FOURTH YEAR

C—University College, V—Victoria College, T—Trinity College;  
M—St. Michael's College.

College Name	Home Address	College Name	Home Address
C Abbs, Miss M. M.	St. Catharines	V Carswell, J. A.	Toronto
V Anderson, Miss B. A.	Park Hill	C Chadwick, Miss M. A.	Toronto
C Andrews, Joseph	Toronto	C Charles, Miss G. H.	Toronto
C Angus, E. R.	Stratford	C Charlesworth, Miss C. C.	Toronto
C Angus, L. R.	Toronto	V Chusholm, W. C.	Toronto
C Armstrong, Miss E. G.	Toronto	C Clark, Miss E. I.	Toronto
V Atkey, R. S.	Owen Sound	V Clarke, Miss N. A.	Ottawa
V Baker, Miss G. A.	Toronto	C Clarke, O. V.	Toronto
V Barber, Miss E. I. M.	Burk's Falls	C Class, H. E.	Elmira
C Barr, R. B. F.	Toronto	V Cleaver, Miss H. W.	Burlington
V Batchelor, Miss K. A.	Leamington	T Clegg, Miss D. M.	Peterborough
C Bate, W. B.	Brampton	M Cloutier, A. L.	North Bay
M Bauer, Miss A. M.	Waterloo	M Coffee, Miss C. M.	Guelph
C Beare, F. W.	Toronto	C Cohen, Miss E.	Toronto
C Beck, F. A.	Penetanguishene	V Cole, Miss I. M.	Hamilton
V Beecroft, E. A.	Whitby	C Conboy, Miss V. L.	Toronto
C Bell, C. A.	Walkerville	C Cook, Miss I. M.	Cheltenham
V Bennett, Miss G.	Toronto	V Cooke, Miss M. E.	Cobourg
M Benoit, Miss E. M.	Petite Cote	C Copeland, P. A.	Toronto
C Binning, R. D.	Moose Jaw, Sask.	M Costello, W. L.	Ennismore
C Black, Miss G. F.	Toronto	V Cotton, Miss L. H.	Colborne
C Black, R. T.	Truro, N.S.	V Creighton, D. G.	Toronto
C Blackburn, Miss M. E.	Toronto	*M Cronyn, Miss M. F.	Toronto
M Blanchard, Miss E. M.	Lindsay	C Cronyn, T.	London
C Blanchard, Miss H. D.	Toronto	C Crossen, W. V.	Cobourg
C Blundall, Miss J. B.	Toronto	C Crozier, Miss A. E.	Port Perry
C Bone, Miss M. E.	Toronto	C Cuddy, D. J.	Amherstburg
T Bonnycastle, C. H.	Dauphin, Man.	T Daly, Miss M. I.	Napanee
C Booth, A. K.	Toronto	M Daly, M. J.	Farrellton, Que.
M Booth, Miss L. M.	Toronto	V Davidson, Miss C. I.	Burlington
C Bowman, A. C.	Halifax, N.S.	C Davidson, Miss M. E. G.	Mimico Beach
C Boyd, Miss M. S. R.	Toronto	V Davis, Miss E. A.	St. Catharines
C Brady, J. M.	Toronto	T deLom, T. C. B.	Toronto
C Breithaupt, W. H.	Kitchener	C Denoon, Miss A. I.	Toronto
V Brown, Miss H. H. B.	St. Mary's	V Devitt, Miss A. B.	Bowmanville
C Brown, N. P. H.	Toronto	C Dickler, I. P.	Toronto
C Brownell, R. W.	Toronto	C Dixon, R. M.	Peterborough
C Brownson, C. A.	Belleville	T Docter, Miss G. M.	Toronto
V Brunt, W. R.	Hanover	C Doidge, W. G.	Toronto
C Burton, A. S.	Toronto	C Donald, Miss I. M.	Hamilton
C Cahoon, N. C.	Bloomfield	C Donaldson, Miss M. C.	Toronto
V Caldwell, Miss I. H.	Georgetown	V Dougall, H. E.	Oakville
M Callaghan, M. E.	Toronto	C Dunbar, Miss K. S.	Guelph
C Campbell, Miss M. E.	Kirkfield	V Duncan, D. M.	Toronto
M Canary, W. F.	Hamilton	C Dworkin, B.	Toronto
V Carnaghan, Miss A. H.	Scarborough	T Ellis, J. D.	Mount Forest
V Carnahan, Miss H. A.	Toronto	C Elsley, W. B.	Campbellville
V Carruthers, Miss R. H.	Toronto	M English, Miss E. M.	Toronto
C Carson, J. A.	Gamebridge	M Enright, Miss M. M.	Toronto

\*Michaelmas Term.

College Name	Home Address	College Name	Home Address
V Evans, Miss F. K. W.	Toronto	C Hicks, Miss J. M.	Kars
V Everett, Miss M. L.	Iroquois	C Hill, Miss G. E.	Toronto
C Ewart, Miss A. H.	Toronto	C Hill, G. E.	Toronto
C Fairbairn, Miss H.	Toronto	†T Hill, L. C.	Oshawa
T Farncomb, F. J.	.. Toronto	V Hiltz, Miss A. E.	Toronto
C Fenwick, Miss D. A.	Toronto	C Hrd, Miss E.	Wallaceburg
C Finch, R. D. C.	Toronto	V Hoidge, Miss A. M.	Toronto
C Findlay, D. H.	Carleton Place	C Holmes, B. T.	Toronto
M Flaherty, J. F.	Alton	C Hough, H. B.	Amherstburg
C Fleming, D. M.	Galt	M Houlahan, Miss G.	Toronto
C Fleming, R. H.	Toronto	C Howson, Miss L. C.	Norwood
C Fraser, Miss M. A. M.	Ottawa	V Hubbell, Miss B. H.	Smith's Falls
C Gelber, E. E.	Toronto	V Hudson, F. E.	Toronto
V Gibbons, J. G.	Toronto	C Hull, Miss M. C.	Toronto
V Gilbert, F. A.	Fingal	C Hunter, R. S.	Kalso, B.C.
C Gilfillan, Miss V. G.	Orono	C Huth, Miss M. I.	Stayner
C Glassey, C. Q.	Toronto	T Irvine, Miss A. M.	Shannonville
C Govan, Miss M. K. L.	Welland	C Jack, J. C.	Toronto
C Gowdy, D. M.	Limehouse	V Jenking, Miss R. I.	Toronto
V Grafton, H. F. P.	Sault Ste Marie	V Jerome, Miss E. A.	Dundas
C Graham, Miss L. G.	Bothwell	C Johnston, Miss D. M.	Toronto
V Graham, W. M.	Toronto	C Kaplan, Miss I. S.	Toronto
C Grant, Miss M. M.	Toronto	M Kastner, Miss E. C.	Toronto
C Gray, Miss A. P.	Toronto	C Keast, R. W.	Toronto
C Gray, Miss G. G.	Coldwater	V Keenleyside, E. A.	Regina, Sask.
C Green, Miss E. W.	Toronto	C Keens, Miss M. M.	Toronto
T Gregory, Miss E. G.	St. Catharines	M Kehoe, Miss C. E.	Bolton
V Griffith, E. N. T.	Stratford	C Kellman, Miss H. A.	Bridgetown, Barbados, B.W.I.
C Groat, D. L.	Norwich	V Kendrick, T. D. H.	Toronto
V Gundy, E. M.	Toronto	C Kenen, I. L.	Toronto
C Guy, H. L.	Toronto	T Kister, C. V.	Chippawa
V Hagerman, Miss M. A.	Toronto	†T Klachn, J. O.	Stratford
C Haines, Miss F. L.	Wingham	V Kluck, I. J.	Elmira
C Hamilton, A. D. F.	Toronto	C Klotz, Miss M. E.	Ottawa
C Hanes, C. S.	Toronto	C Kniveton, Miss M. J.	Toronto
V Hanley, H. G.	Milton	V Knox, Miss K. D.	Haileybury
M Hannan, Miss C.	Toronto	C Koskey, K.	Hamilton
V Hardwick, S. W. M.	Bolton	M Kramer, Miss H. M. F.	Guelph
C Hargreaves, Miss F. I.	Toronto	V Lane, W. S.	Toronto
M Harkins, Miss M. E.	Toronto	V Langford, H. E.	Calgary, Alta.
C Harkness, Miss J. W.	Toronto	M Laroche, Miss B. V.	Ottawa
C Harris, Miss D. K.	Ottawa	C Lash, K. M.	Toronto
C Harris, Miss R. C.	Toronto	M Latchford, Miss D.	Toronto
C Harris, W. C.	Toronto	C Lawson, F. S.	Toronto
C Hart, E. T.	Belleville	T Lazier, H. D. F.	Hamilton
C Hart, J. L.	Toronto	M Leahy, J. P.	Peterborough
V Hartwell, Miss R. K.	Chengtu, China	V Lewis, L. H.	Oshawa
V Harvey, J. M.	Exeter	C Liggett, M. J.	Guelph
M Hayes, Miss A. T.	Toronto	V Lindsay, E. H.	Hagersville
M Healy, L. T.	Atherley	C Lindsay, Miss M. M. L.	Renfrew
V Hendershot, Miss G. A.	Hamilton	†C Lippert, H. J.	Kitchener
C Hetherington, Miss O.	Toronto	C Little, W.	Teeswater
C Hetherington, H.	Toronto	C Littlejohn, R. H.	Toronto

†Dispensation for Session

§Dispensation for Michaelmas Term.

College Name	Home Address	College Name	Home Address
V Livermore, E. S.	Clinton	C Norsworthy, Miss H. A.	St. Thomas
C Locheed, Miss I. J.	Hamilton	V Oaks, Miss B. R.	Preston
T Luxton, G. N.	Mount Forest	T Ormsby, Miss N. A.	Toronto
C Lyall, Miss J. E.	Niagara-on-the-Lake	V Orr, W. R.	Glencairn
M Lyons, J. J.	Ottawa	M O'Sullivan, Miss M. B.	Hamilton
C McAllister, S.	Toronto	C Page, F. H.	Toronto
C McBride, Miss M. E.	Smith's Falls	M Pamphilon, Miss I.	Toronto
†M McCabe, J. P. G.	Kingston	V Park, C. G.	Fair Ground
§C MacDonald, C. C.	Muirkirk	V Parker, Miss M. F.	Caledonia
M MacDonald, J. A.	Aurora	C Parker, Miss M. K.	Stratford
C McDonnell, Miss C. G.	Toronto	C Paton, Miss H. I.	Toronto
C MacEwan, Miss M. J.	Goderich	C Paton, R. W.	Flesherton
M McGovern, Miss K.	Toronto	T Patterson, Miss E. M.	Paris
C McHenry, Miss C. H. E.	Toronto	C Pattenison, W. E.	Toronto
V McLroy, Miss T. R.	Hamilton	C Péquegnat, R. J.	Guelph
C MacInnis, Miss J. H.	Iroquois	C Phippen, B. C.	Sarnia
V McKay, Miss B. H.	Woodstock	T Ponsford, Miss V.	St. Thomas
C McKay, D. D.	Toronto	C Porter, J. C.	Toronto
C MacKinnon, Miss M. C.	Toronto	C Power, Miss J.	Toronto
	Cranbrook, B. C.	C Raney, Miss A. H.	Toronto
V McLean, Miss M. D.	Lindsay	C Rapley, Miss M. C.	Strathroy
C McLean, Miss R. M.	Toronto	C Reading, Miss J. D.	Toronto
T McLennan, Miss E. Z. L.	Beaverton	C Reeves, Miss M.	Fort Frances
C MacLennan, Miss H. M.	Toronto	C Reid, L. D.	Toronto
C McLeod, Miss A. F.	Toronto	C Rhodes, J. B.	Toronto
C McLeod, G. P.	Toronto	C Richardson, A. L. A.	Toronto
V McMullen, Miss F. G.	Belleville	V Ricker, Miss V. M.	Canfield
M McNally, Miss K. E.	Utterson	V Roberts, Miss J. S.	Toronto
V McRoberts, Miss R. D.	Port Arthur	T Robertson, A. B.	Victoria, B.C.
M Mahon, J. A.	Aberfoyle	C Robertson, Miss E. D.	Victoria, B.C.
C Maier, C. J.	Hamilton	V Robertson, Miss F. G.	Iroquois
M Marks, Miss M.	Hamilton	C Robinson, S. H.	Walkerville
M Martin, P. J. J.	Pembroke	C Robinson, W. A.	Penetanguishene
M Martin, W. S.	Whitehorse, Y.T.	C Rodgers, Miss W. L.	Toronto
C Mather, Miss H. C.	Toronto	C Rogers, Miss D. M.	Toronto
C Matthews, A. S.	Toronto	V Rogers, R. R.	Norwood
C Mayhew, Miss E. A.	Huntsville	C Root, Miss S. B.	Dunnville
C Melhuish, Miss G. I.	Toronto	V Rose, Miss E. J.	Port Perry
V Miller, F. C.	Stratford	V Rose, Miss G. R. F.	Port Perry
V Mills, R. S.	Toronto	C Rose, H. J.	Winnipeg, Man.
C Minden, H. A.	Hamilton	C Rose, Miss M. J.	Toronto
C Mitchell, Miss P. W.	Toronto	C Ross, Miss E. H.	Toronto
T Mitchell, Miss R. H.	Lucknow	C Ross, Miss M. T.	Brussels
C Mitchell, W. B.	Sarnia	C Ross, Miss P. A.	Hawkesbury
C Monypenny, Miss C. F.	Toronto	V Rowell, Miss M. C.	Toronto
M Moore, Miss C. B.	Toronto	M Runstadler, Miss M.	Toronto
C Morden, Miss E. D.	Hamilton	M Rush, E. W.	Toronto
T Morrison, C. M.	Vancouver, B.C.	V Rutnam, R. L.	Colombo, Ceylon
C Morwick, Miss L. I.	Hamilton	C Salter, P. E.	Toronto
C Murphy, Miss M. A.	Wardsville	C Saul, Miss M. E.	Toronto
M Murtha, T. J.	Toronto	*V Schlichter, Miss N. M.	Bright
C Nichol, Miss F. I.	Durham	C Schmidt, Miss E. M.	Stratford
V Norman, Miss G. L.	Mitchell	C Scott, C. B. C.	Toronto

§Dispensation for Michaelmas Term.

\*Michaelmas Term.

†Dispensation for Session.

College Name	Home Address	College Name	Home Address
C Shadick, H E	London, Eng	C Trent, Miss E. F.	Toronto
M Shannon, Miss C. A.	Sudbury	C Troop, Miss E. J.	Ottawa
C Sheahan, Miss R. M.	St. Catharines	V Turnbull, R. H.	Dundas
C Shearson, C. A.	Toronto	V Uren, Miss H. E.	London
C Sheppard, G. R.	Toronto	V Vanderburgh, F. R.	Maple
C Shepperson, Miss N. F.	Brantford	C Vanstone, Miss J.	Wingham
C Shortill, Miss I. J.	Toronto	C Vennels, G. W.	Regina, Sask.
C Simpson, G. H. D.	Ottawa	C Verity, Miss F. E.	Brantford
V Sine, Miss N. M.	Belleville	V Vokes, Miss M. C.	Toronto
V Sipprell, Miss T. R.	Victoria, B. C.	V Wainwright, Miss E. T.	Huntsville
V Slater, Miss E. S.	Toronto	C Walker, B. R.	Toronto
V Slater, Miss P. E.	Waterdown	T Walker, Miss M. C.	Grand Bend
V Smith, A. E.	Toronto	C Wallace, Miss E.	Goderich
C Smith, Miss G. E.	St. Catharines	V Wallace, Miss M.	Kamsack, Sask.
C Smith, Miss G. S.	Stouffville	C Wallace, Miss M. E.	Burgessville
V Snider, Miss L. Y.	St. Jacobs	T Wallace, Miss M. K.	Toronto
V Snyder, Miss G.	St. Jacobs	C Wallace, Miss M. V.	Toronto
C Snyder, S. A.	Waterloo	M Walsh, Miss M. M.	Lindsay
C Solomon, Miss F. D.	Brighton	V Walwyn, J. P.	Weston
C Somerset, Miss T. E.	Freeman	C Wanamaker, Miss H. E.	Niagara Falls
T Sparling, G. P. M.	Toronto	C Ward, Miss D. E.	Palmerston
C Spence, W. F.	Toronto	C Ward, Miss E. M.	Toronto
C Sprague, W. P.	Toronto	T Washington, C. F.	Eastview
C Sprott, Miss W. R.	Toronto	C Watson, R. J.	Toronto
V Squire, Miss R. S.	Norwood	C Watson, W. R.	Paris
C Stagg, Miss E. A.	Brockville	C Webb, G. W. M.	Toronto
C Stagg, R. G.	Toronto	C Weber, W. C.	Windsor
V Scalter, O. R.	Oshawa	C Weinberg, B.	Toronto
C Standing, Miss E. M.	Brantford	V Wells, W. I.	Campbellton, N. B.
C Stevens, Miss M. B.	Port Elgin	C West, Miss P. M.	Toronto
V Stevenson, S. E.	Melbourne	V Westington, M. M.	Bewdley
V Stinson, Miss M. G.	Peterborough	V Westman, Miss E. M.	Toronto
C Stirling, Miss J. M.	Agincourt	C Whaley, A. C.	Embro
C Stoddart, Miss H. G.	Toronto	M Whelan, J. H.	Westport
C Stogdill, C. G.	Toronto	C White, R. G.	Moose Jaw, Sask.
C Strauss, N.	Toronto	C Wiancko, Miss F. H.	Toronto
C Stubbs, Miss B. E.	Toronto	C Wickson, Miss M. E.	Toronto
C Stubbs, Miss C. E.	Toronto	V Willard, Miss E. G.	St. Mary's
C Sullivan, M. V.	St. Catharines	V Williams, P. E.	Toronto
C Switzer, Miss J. E.	Shawville, Que.	T Wilson, Miss A. N.	Duncan, B. C.
C Tart, C. E.	Toronto	C Wilson, Miss E. D.	Seaforth
C Talbot, Miss W. V.	Calgary, Alta.	V Wilson, H. G.	Toronto
C Taylor, Miss M. J.	Toronto	C Wolfson, N.	Toronto
C Taylor, R. C.	Toronto	V Wood, J. H.	Millbrook
M Theobald, J. C.	Peterborough	C Wood, Miss M. H.	Toronto
V Thomas, Miss A. M.	Niagara Falls	V Woods, W. L.	Toronto
V Thompson, Miss F. L.	Toronto	V Wright, H. L.	Hanilton
C Thomson, Miss H. J.	Toronto	C Wright, Miss H. M.	Toronto
T Thomson, J. H.	Rothsay, N. B.	C Wrong, Miss A. H.	Toronto
M Thomson, V. A.	Toronto	M Yates, Miss M. C.	New Liskeard
C Thorburn, Miss M. T.	Niagara Falls	C Young, D. A.	Toronto
C Tilley, E. P.	Bowmanville	M Young, Miss K. A.	Toronto
C Torrance, J. C.	Toronto	T Younger, Miss R. E.	Toronto
C Torrance, W. C.	Shelburne		

## SUMMARY—FOURTH YEAR

University College	235
Victoria College	106
Trinity College	28
St. Michael's College	47
	<hr/> 416

## OCCASIONAL STUDENTS

U—University of Toronto, C—University College; V—Victoria College;  
T—Trinity College, M—St. Michael's College.

College Name	Home Address	College Name	Home Address
C Alexander, H. M.	St. John, N.B.	*V Fleming, Miss A. V.	Todmorden
**C Allen, W. J. A.	Toronto	U Fleury, Miss V.	Toronto
C Asman, Miss M. L.	Toronto	M Fraser, G. E. M.	Ottawa
C Barford, Miss I. R.	Toronto	**C Fry, Miss E. L.	Niagara Falls
V Barnett, Miss L. E.	Toronto	U Fuller, W. E.	Peterborough
C Barron, F. A.	Port Dover	C Gale, Miss D. M.	Toronto
†C Beatty, Miss L. H.	Toronto	T Graham, H.	Toronto
U Blake, V. B.	Toronto	U Greening, W. J.	Toronto
**C Blanchard, Miss C. M.	Lindsay	C Greig, J. R.	Shallow Lake
**C Bolger, J. R.	Georgetown	C Hamly, D. H.	Toronto
V Braley, F. W. L.	Cainsville	C Harris, Miss R. A.	Toronto
C Brand, Miss F.	Dundee, Scotland	*Harrison, Miss R.	Tamworth
C Brandon, W. E.	Toronto	**C Hartmann, E. J.	Brantford
T Bullinger, E.	Chippawa	C Hawley, Miss O. L.	Toronto
V Brown, M. R.	Lindsay	C Hay, Miss L. V.	Toronto
C Buckingham, Miss A.	Guelph	**C Hayes, Miss A.	Toronto
C Burton, Miss N. W.	Toronto	V Henderson, C. E.	Burnaby
V Butt, S.	Lumsden, Nfld.	U Hislop, Miss E. E.	Toronto
T Campbell, D. H.	Toronto	**†C Home, K. P.	Toronto
V Campbell, G. W. W. A.	Maple	V Ireland, C. H.	Mansfield
V Card, J. A.	Harrisburg	U Irwin, Miss K. P.	Toronto
U Carroll, Miss C. H.	Toronto	**C Kastner, Miss E.	Toronto
U Chesnut, Miss E.	Toronto	**C Kelly, C. M.	Toronto
C Clarkson, R. C.	Toronto	**C Kerr, Miss H. M.	Toronto
V Cobbledick, Miss H. J.	Toronto	**C King, J. M.	Stratford
C Cohen, Miss T.	Toronto	**C Kingsley, Miss N.	Lindsay
U Conrod, S. F.	Regina, Sask.	†U Kubota, C.	Japan
U Dashwood, Mrs. D. L.	Birch Cliff	**C Larochelle, Miss B. V.	Ottawa
U DiStasi, M.	Toronto	T Larsen, Miss A.	Katrine Sta.
U Douglas, Mrs. A. L.	Toronto	**C Le Boldus, J. M.	Regina, Sask.
C Duff, R.	Toronto	C Lee, Miss E.	Toronto
U Edmonds, A. J.	Toronto	C McConnell, Miss C.	Toronto
C Emmet, A. G.	Toronto	U McDougall, G. M.	Toronto
*C Evans, K. C.	Toronto	**C McEaney, V. X.	Toronto
**C Farrell, Miss E. P.	Niagara Falls	**C McGovern, Miss K.	Toronto
C Ferguson, R. V.	Toronto	U McIntyre, J. V.	Brantford
**VC Flahiff, G. B.	Paris	C McQueen, D.	Stayner

\*\*Duplicate Registration.

†Easter Term

\*Michaelmas Term



College Name	Home Address	College Name	Home Address
C McQueen, E. D	Shediac Cape, N B	V Scott, L. W. W	Port Hope
**C Mallon, J. F.	Toronto	C Sellar, M.	Toronto
U Mallon, J. P.	Toronto	U Sembaj, I.	Toronto
V Mitchell, Miss P. S.	Oakville	U Sembaj, Mrs. F. O.	Toronto
**C Mungovan, D. O	Toronto	U Sharpe, G. V.	Toronto
C Newman, J. A.	Toronto	U Shuman, P. G.	Toronto
**C O'Keefe, C	Vernon, B.C.	U Simpson, Miss T.	Toronto
C Ord, Miss G. M	Islington	V Smale, Miss D. M.	Toronto
C Owens, H. T.	Seoul, Korea	C Sproule, W. R.	Toronto
T Parker, Miss N.	New York, N Y.	V Stinson, Miss C. A.	Toronto
V Parsons, W. M.	Toronto	**C Story, Miss N.	Guelph
U Pearson, O. L.	Toronto	V Thistle, W. T.	St. Johns, Nfld.
C Pepperdene, L. M. M	Toronto	†C Towers, Miss C. E.	Toronto
C Perry, R. H.	Welland	V Turner, Miss K.	Toronto
†U Pezzack, J.	Toronto	V Turner, W. H.	Toronto
**C Phelan, Miss M. J.	Guelph	V Usher, W. R.	Cushing, Que.
**C Power, G. C.	Grand Falls, Nfld.	C Von Maur, Miss A. H.	Toronto
C Reid, Mrs. H. O.	Toronto	C Waldie, J. K.	Toronto
C Richardson, Miss E. M.	Toronto	C Walker, Miss L. B.	Toronto
T Robbins, J. T.	Toronto	U Warren, J. F.	Toronto
C Robertson, H.	Chatham	C Wheadon, Miss M.	Toronto
T Ross, D. G.	Toronto	V Wilson, R. L.	Delhi
U Sanderson, D. E.	Toronto	**U Withrow, Miss E. M.	Toronto

\*\*Duplicate Registration.

†Easter Term.

#### SUMMARY—OCCASIONAL STUDENTS

University of Toronto..	27
University College ..	65
Victoria College ..	21
Trinity College ..	6
St. Michael's College	1
Duplicate Registrations	28

## DEPARTMENT OF UNIVERSITY EXTENSION

## SUMMER SESSION, 1924

Name	Home Address	Name	Home Address
Adams, Miss E. I	Warton	Houston, W. J	Toronto
Ames, V. N	Hamilton	Howe, Miss M	Hamilton
Andrews, Miss E. L	Simcoe	Howie, Miss M. F	St. Catharines
Armstrong, D. W	Toronto	Howitt, C	Toronto
Beacom, E. C.	Toronto	Hunt, Miss E. L	North Bay
Beaman, Miss E. K	Essex	Kennedy, Miss H. E	Princeton
Bell, C. B	Ottawa	Keys, G. P	Hamilton
Benn, Miss R. B	Toronto	Kljack, G. A	Elmira
Biggart, J. R	Toronto	Langdon, R	Toronto
Bingle, T	Brantford	Laventure, G. E	Centre Island
Brock, M. W.	Calgary, Alta.	Lemay, Mrs. G. A	Grimsby
Campbell, G. T	Madoc	Lewis, Miss A. R	Hamilton
Carbin, H. E	Toronto	Liezert, Miss D	Hamilton
Clarke, Miss M	Calgary, Alta.	Livingstone, Miss M	Barrie
Coffey, Miss J	Ottawa	Lynch, Miss R. A. M	Ottawa
Cole, R. G	Fairbank	McAlpine, Miss A	Welland
Collins, W. A	Oakville	MacDonald, R	Parkehill
Coutts, Miss M. J	Cumberland	McEwen, F	Toronto
Cross, Miss J. I	Toronto	MacGregor, Mrs. J. E	Toronto
Cummei, Miss E. M	Oshawa	Martin, A. A	Newcastle
Davidson, Miss A. M	Toronto	Martin, Miss K. E	Toronto
Dawson, Miss V. M	St. Catharines	Martin, T. H. W	Toronto
Devitt, L. K	Toronto	Meen, H.	Toronto
Dickinson, G. H	Toronto	Merritt, R. L.	Toronto
Dickson, Miss L. I	Toronto	Mitchell, J. H	Toronto
Dillon, T. G	Toronto	Morris, C. M	Feversham
Dipsam, Mrs. M	Sprucedale	Murray, Miss J. S.	Toronto
Doble, Miss O. E	Tyrone	Nicholson, R. W.	Toronto
Dodds, Miss H. M	Hamilton	Nixon, D. A	Toronto
Dougall, Miss L. H	Barrie	Norris, D. A	Toronto
Doupe, H. A	Port Credit	O'Connor, Miss K	St. Catharines
Duignan, Miss J. M	Hamilton	Park, M. H	Peterborough
Dunlop, Miss E. E	Aylmer	Parker, H. T	Toronto
Eby, H. E	Kitchener	Patten, F. A.	Toronto
Edwards, H. W	Wooler	Perrin, Miss M. W	Toronto
Fitzgerald, Miss W. S	Ayr	Porter, W. A	Scarborough
Gallagher, Miss M	Barrie	Pothier, Mrs. K. A	Hamilton
Game, J. M	Toronto	Prosser, T.	Toronto
Garbutt, E. P	London	Quinn, Miss M. G	Oshawa
Gibson, J. A	Toronto	Raymond, Miss U	Toronto
Gignac, Miss I. Z	Windsor	Reynard, Miss F. C	Toronto
Gilson, G. H	Toronto	Robb, I. M.	Toronto
Gulston, H. F	Toronto	Robinson, Miss M. A	Toronto
Haig, A. P	Toronto	Ross, Miss C. B	Brooklin
Harris, H. W	Toronto	Scanlon, Miss M. G	Toronto
Harris, L. M.	Port Perry	Schnick, F. W	Eganville
Haydon, C	Toronto	Senn, Miss E. M	Brantford
Henderson, J. McC	Toronto	Seymour, P. A	Aurora
Hewitt, B. H	Toronto	Sheridan, Miss R. M	Napanee
Hinchliffe, Miss W	Hamilton	Short, J. H	Toronto
Horne, Miss L. B	Zephyr	Smith, C. B	Hamilton

Name	Home Address	Name	Home Address
Squire, E. V.	Toronto	Wagg, J. C.	Mount Dennis
Stephens, J. E.	Toronto	Ward, Miss D. E.	Palmerston
Stewart, Miss J.	Pembroke	Watson, S. A.	Toronto
Sutton, H. P.	Toronto	Waugh, Miss H. J.	Toronto
Syer, K. E.	Bexley	Waugh, Miss M.	Toronto
Sister Alexis	Peterborough	Weir, Miss I. M.	Toronto
Sister Angeline	Toronto	White, Miss N. K.	Plevna
Sister M. of St. Irma	St. Raphaels West	White, A. G.	Toronto
Sister St. John	North Bay	Wilker, M. J.	Claremont
Sister St. Vincent	Timmus	Will, G.	Toronto
Torrance, T. M.	Toronto	Wilson, Miss B. A.	Toronto
Tovell, W. V.	Kincardine	Wilson, Miss B. C.	Niagara Falls
Turner, Miss O. M.	Toronto	Young, Miss L. G.	St. Catharines

## OCCASIONALS

Cavell, H. E.	Toronto	Sister M. Bonaventure	Toronto
Kenen, I. L.	Toronto	Sister Celestine	Hamilton
Ormsby, Miss N. A.	Toronto	Turner, Miss E. H.	Toronto
Reid, Mrs. H. O.	Toronto	Walker, Miss J. I.	London
Strangways, F. B.	Toronto	Weinberg, B.	Toronto
Switzer, Miss J. E.	Toronto	Winchester, H. S.	Ottawa

## TEACHERS' CLASSES

## TORONTO

Name	Home Address	Name	Home Address
**Armstrong, D. W	Toronto	Kerruish, H B	Toronto
Barnard, W. T. . . .	Toronto	Lang, Miss R. B	Toronto
**Beacon, E. C	Toronto	*Langdon, R	Toronto
**Biggart, J. R	Swansea	Lavery, W G	Toronto
Blood, Miss G. A	Toronto	**Lemay, Mrs G A	Grimsby
Boucher, G. R	Toronto	Love, Miss K	Toronto
Bremner, H. A . . .	Toronto	McCool, Miss A C	Toronto
Brown, Miss R. P. . . .	Toronto	McDougall, C. A	Toronto
Burgar, W J	Toronto	McEacheran, J. M	Toronto
**Campbell, G. T	Toronto	**McEwen, F. A .	Toronto
**Carbin, H E	Toronto	McIver, D. A	Toronto
Code, J A	Toronto	McGregor, B	Toronto
Crone, Miss M .	Toronto	MacGregor, Mrs J E	Toronto
Cronin, Miss M. M.	Toronto	MacInnes, Miss E M.	Toronto
**Cross, Miss J I	Toronto	MacTavish, Miss F	Toronto
*Cummer, Miss E M	Toronto	Macklin, G E	Toronto
Cummings, Miss M. M	Toronto	Magee, Miss C. H	Toronto
Dalton, Miss M T	Toronto	Malcolm, Miss M. J	Toronto
**Davidson, Miss A M.	Toronto	Manning, C. E	Toronto
**Devitt, L K	Toronto	**Martin, Miss K. E	Toronto
**Dickinson, G H	Toronto	**Martin, T. H W	Weston
Dickson, A C	Toronto	Mason, A. A. . . .	Toronto
**Doupe, H A	Port Credit	Matthews, R. H. L . . .	Toronto
**Dunlop, Miss E. E . .	Toronto	**Merritt, R. L . . .	Toronto
**Eby, H. E . . . . .	Toronto	Middleton, Miss M	Toronto
Elliott, A. H . . . . .	Toronto	Moncrieff, Miss M. R	Toronto
Elliott, F. W	Toronto	Moore, H C	Toronto
Ellis, C O	Toronto	Muckle, Miss L. W	New Toronto
Evans, A. G	Toronto	**Murray, Miss J. S	Toronto
Feasby, G H	Toronto	Newton, Miss S E	Toronto
Forbes, Miss M. I	Toronto	**Nicholson, R. W	Toronto
Fritz, W. E	Toronto	Nickle, Miss M. I . . .	Toronto
**Garbutt, E. P . .	Toronto	**Nixon, D. A	Toronto
**Gilson, G H	Toronto	**Norris, D. A	Toronto
Grigg, Miss M. E. J . .	Toronto	**Parker, H. T. . . .	Toronto
**Haig, A. P	Toronto	Paton, W D	Toronto
Hall, R K	Toronto	Perrin, H. D	Toronto
Hancock, E W . . .	Toronto	**Perrin, Miss M. W	Toronto
**Harris, H. W	Toronto	Pollard, E. V.	Toronto
Hartwick, W E. . .	Toronto	**Porter, W. A	Toronto
**Haydon, C. W . . .	Toronto	**Prosser, T . . . .	Toronto
Heinbecker, E. G . . .	Toronto	Purvis, Miss O J . . .	Toronto
**Henderson, J. McC	Toronto	**Quinn, Miss M G . .	Toronto
**Hewitt, B. H	Toronto	Ramsden, F. C	Toronto
**Houston, W. J	Toronto	**Raymond, Miss U . .	Toronto
**Howitt, C	Toronto	**Reynar, Miss F. C . .	Toronto
Hunter, A. C	Toronto	Richardson, S	Toronto
James, Miss C. F . . .	Toronto	**Robb, I. McN	Toronto
Jennings, Miss L. F.	Toronto	**Robinson, Miss M A	Toronto
Kell, Miss C	Toronto	Ross, A. M	Toronto
Kendall, Miss E. C . .	Toronto	**Ross, Miss C B . . .	Brooklyn

\*\*Duplicate Registration

Name	Home Address	Name	Home Address
Russell, Miss M K	Toronto	**Turner, Miss O. M	Toronto
**Scanlon, Miss M G	Toronto	Vickery, G A	Toronto
Scott, Miss O M	Toronto	Waddell, F. F	Toronto
**Short, J. H	Toronto	Wagg, J. C	Mount Dennis
Smith, C R	Toronto	Walker, Miss L M	Toronto
Smith, Miss M	Toronto	Wallace, F E D	Toronto
Snider, Miss D	Toronto	Walling, W L	Toronto
Springate, Miss E B	Toronto	**Watson, S A	Swansea
**Squire, E. V	Toronto	**Waugh, Miss H. J	Toronto
Stewart, Miss A E	Toronto	**Waugh, Miss M	Toronto
**Sutton, H P	Toronto	**Weir, Miss I M	Toronto
Talbot, C A	Toronto	**White, A G	Toronto
Tate, F J	Toronto	White, Miss M A	Toronto
Taylor, Miss C L	Toronto	**Will, G	Toronto
Toll, C E	Toronto	Williamson, J. D.	Toronto
Torrance, T. M	Toronto	**Wilson, Miss B. A	Toronto
Tryon, Miss M. J	Toronto		

## OCCASIONALS

Britton, G. C	Toronto	Mackenzie, Miss G I	Toronto
Carew, Miss H P.	Toronto	Murray, Mrs. D. M	Aurora
Chidley, Miss E	Toronto	Murray, Mrs. L	Toronto
Dowdall, Miss B	Toronto	Pamphilon, Miss I	Toronto
Fleury, Miss V	Toronto	Rankin, W. M	Toronto
Hurst, Mrs. R. O	Toronto	Reynar, Miss H	Toronto
Jacob, Miss A. L	Toronto	Riggs, Miss M	Mount Dennis
Knott, Miss C G	Toronto	Ryan, Miss M E	Toronto
Little, F McN	Toronto	Somerton, Miss S.	Toronto
MacEachern, Miss E. V	Toronto	Wilkinson, Mrs. M.	Toronto

## HAMILTON

**Ames, V N	Hamilton	**Lewis, Miss A R. P.	Hamilton
Campbell, Miss M. F	Hamilton	Meuser, Miss O	Hamilton
Colling, L. J	Hamilton	Pickering, J R	Hamilton
**Dodds, Miss H M	Hamilton	**Pothier, Mrs. K. A	Hamilton
**Duignan, Miss J M	Hamilton	Reding, G F	Hamilton
Duncan, Miss N	Hamilton	**Smith, C. B	Hamilton
Halloran, Miss B M	Hamilton	Stewart, Miss L. A	Hamilton
**Hinchliffe, Miss W	Hamilton	Troup, Miss M	Hamilton
**Howe, Miss M	Hamilton	Truscott, Miss R I	Hamilton
**Kennedy, Miss H. E	Hamilton	Wilde, L. C	Grimsby
**Keys, G P	Hamilton	Wilson, Miss M A	Hamilton
**Klinck, G. A	Hamilton	Witherspoon, Miss E	Hamilton
Laurie, Miss B M	Hamilton		

## OCCASIONALS

Anguish, Miss G	Hamilton	McKenzie, Miss B	Hamilton
Donohue, J	Hamilton	McKenzie, Miss K	Hamilton
Farmer, Miss F	Ancaster	Matches, Miss M. R	Hamilton
Harris, D	Hamilton	Medley, Miss M. B.	Hamilton
Henderson, R. M	Hamilton	Mullens, Mrs. G	Hamilton
Kendrick, Miss A	Ancaster	Stewart, Miss I. M	Hamilton

\*\*Duplicate Registration.

## ST. CATHARINES

Name	Home Address	Name	Home Address
**Dawson, Miss V. M	St. Catharines	**O'Connor, Miss K	St. Catharines
Harris, Miss F. E.	Niagara Falls	**Stephens, J. E.	St. Catharines
**Howie, Miss M. F.	St. Catharines	**Wilson, Miss B. C.	Niagara Falls
**McAlpine, Miss A.	Welland	**Young, Miss L. G.	St. Catharines

\*\*Duplicate Registration.

## OCCASIONALS

Affleck, Mrs. R. G.	St. Catharines	Hird, Miss M. G.	St. Catharines
Cameron, Mrs. C.	St. Catharines	MacKay, Miss D.	St. Catharines
Clark, Miss A. B.	St. Catharines	Marquis, Miss M. C.	St. Catharines
Cuffe, Miss E.	St. Catharines	Pincock, Miss J. O.	St. Catharines
Duff, Miss K. E.	St. Catharines	Robertson, A. W.	St. Catharines
English, Miss O. N.	St. Catharines	Rolls, Miss H. A.	St. Catharines
Finnie, Miss A. M.	St. Catharines		

## SUMMARY

Summer Session	140
Teachers' Classes	213
Duplicate Registrations	72
Total	281

## SUMMARY IN THE FACULTY OF ARTS

	UNIVERSITY OF TORONTO	UNIVERSITY COLLEGE	VICTORIA COLLEGE	TRINITY COLLEGE	ST. MICHAEL'S COLLEGE	TOTAL
First Year.....	.	420	154	55	85	714
Second Year ...	...	285	145	29	36	495
Third Year. ..	...	283	131	33	57	504
Fourth Year ....	...	235	106	28	47	416
Occasionals ...	27	65	21	6	1	120
Teachers' Course ..	213	.	.	.	.	213
Summer Session .	140	.	.	.	.	140
Duplicates. ..	100	2	.	.	...	102
Totals. ....	280	1286	557	151	226	2500

## FACULTY OF MEDICINE

## FIRST YEAR

Name	Home Address	Name	Home Address
Abidh, Miss S. P.	Trinidad, B W I	Livingston, J. W.	Toronto
Anthony, G E R.	Toronto	Long, J. E.	Toronto
Atkins, J L.	Toronto	Loree, L. A.	Rockwood
Bartram, G. T.	Toronto	McAteer, D. K.	Toronto
Benson, R. A.	St George	McCullough, J. F.	Sudbury
Biehn, J. T.	Windsor	McCutcheon, J. W.	Toronto
Blaisdell, J. L.	Brampton	McEachren, J. N.	West Lorne
Bradshaw, Miss P. E.	Windsor	McGarry, H. H.	Niagara Falls
Brennan, J. H. L.	Dunnville	McKinney, J. H.	Brampton
Breslin, Miss E.	Toronto	MacMillan, J. M.	Rochester, N.Y.
Brick, Miss M. A.	Toronto	McNaughton, G. A.	Toronto
Brooks, L. H.	Wellandport	McRae, J. R.	Toronto
Brown, B.	Toronto	MacTavish, S.	Alvinston
Brown, Miss M. B.	Walkerville	Monkhouse, W. A.	Toronto
Caldwell, L. A.	Toronto	Murray, N. L.	Toronto
Charlton, D. S.	Galt	Newman, Miss M. J.	Windsor
Clarke, F. D.	Brantford	Nimick, R. I.	Stratford
Clift, F. A.	Toronto	Nishikawa, F. S.	Toronto
Cock, J. G.	Oshawa	Northey, R. W.	Fenelon Falls
Cragg, G. W.	Greenbank	Numbers, A. A.	Hamilton
Cuddy, F. A.	Amherstburg	O'Connor, D. J.	North Bay
Curtis, J. F.	St. Thomas	Oswald, J. R.	Chesley
Dillane, E. L.	Schomberg	Paiken, H.	Hamilton
Dyble, R. H.	Ioco, B.C.	Parsons, R. M.	Red Deer, Alta
Ferguson, G. C.	Sudbury	Patterson, Miss M. K.	Newmarket
Fine, S. G.	Toronto	Richardson, K. R.	Toronto
Forrester, J. H.	Richmond Hill	Roberts, P. H.	Toronto
Foster, Miss D. C. T.	Bowmanville	Robinson, R. B.	Toronto
Frawley, N. A.	Mount St. Louis	Rogers, J. R.	Ingersoll
Frejd, E. A.	Bruce Mines	Ross, J. H.	Toronto
Good, S. A.	Kitchener	Rothbart, H. B.	Toronto
Graham, J.	Orillia	Scott, J. M.	Toronto
Grant, W. T.	Ottawa	Shier, S. G.	Toronto
Gundry, C. H.	Galt	Silberman, M. A.	Toronto
Hawk, W. A.	Galt	Sinclair, B. L.	Sheridan
Henry, Miss V. I. E.	Stratford	Slade, Miss C. E.	Toronto
Hutton, G. H.	Brantford	Slavinsky, J.	Toronto
Inksater, H. R.	Toronto	Smale, J. K.	Toronto
James, C. F.	Toronto	Smart, R. E.	Brockville
Jenner, L. C.	Charling Cross	Smith, J. H. N.	Barrie
Knox, Miss A. M. D.	Kelowna, B.C.	Smith, Miss M.	Maxville
Lewin, G. W.	Southend	Sparling, D. W.	Toronto
Lind, J. R.	Toronto	Sparrow, G. R.	Toronto
Lipshutz, Miss D. H.	Toronto	Spence, J. M.	Toronto
Lister, J. H.	Newmarket	Sturgeon, L. W. C.	Gilford
Liston, A. F.	Hamilton	Sweet, W. D.	Toronto

Name	Home Address	Name	Home Address
Thompson, E. E. ....	Penetanguishene	Williams, W. W. D. ....	Pembroke
Thompson, L. W. ....	Georgetown	Willits, Miss R. E. ....	Kelowna, B.C.
Track, A. . . . .	Toronto	Wilson, I. R. F. . . . .	Niagara Falls
Wertman, A. ....	Niagara Falls	Winans, W. C. . . . .	Toronto
West, W. G. . . . .	Dunnville	Young, C. T. ....	Toronto
Widdis, A. ....	Hamilton	Young, W. G. . . . .	Toronto
Wilford, W. A. ....	Palmerston		

## SECOND YEAR

Aiken, S. . . . .	Toronto	Gundy, J. E. ....	Windsor
Anderson, J. L. M. ....	Port Hope	Hall, H. G. ....	Toronto
Andrews, F. A. ....	Aurora	Hames, G. H. ....	Oxbow, Sask.
Ansley, A. H. . . . .	Thessalon	Hamill, A. S. ....	Toronto
Appel, A. . . . .	Toronto	Hardie, P. . . . .	Esquimalt, B.C.
Armstrong, A. R. ....	Oakville	Harris, E. R. . . . .	Burlington
Ashenhurst, A. E. . . . .	Toronto	Harris, L. J. ....	Toronto
Avruskin, B. . . . .	Salem	Hawkins, A. R. . . . .	Guelph
Bailey, Miss M. E. ....	Maple	Hillery, D. R. ....	Toronto
Baldwin, Miss K. W. . . . .	Toronto	Hollinrake, A. F. . . . .	Hamilton
Ball, N. J. . . . .	Vernon, B.C.	Hookings, C. E. ....	Nelson, B.C.
Batt, Miss M. F. ....	Toronto	Howell, P. T. ....	Oshawa
Baxter, K. R. ....	Upper Hamilton	Ing, Miss M. C. ....	Toronto
Becker, R. P. ....	Toronto	Ireland, P. E. ....	Toronto
Bryant, E. C. ....	Toronto	Iscovitz, A. ....	Toronto
Burton, Miss B. E. . . . .	Toronto	Ives, L. M. ....	Belleville
Calder, R. G. ....	St. Catharines	Jackson, Miss M. V. ....	Toronto
Cohen, A. . . . .	Toronto	Johnston, C. R. K. ....	Toronto
Cosens, Miss M. . . . .	Wingham	Johnston, W. H. ....	Chatham
Davis, K. F. . . . .	Toronto	Katz, S. . . . .	Toronto
Denoon, J. M. . . . .	Toronto	Kelly, J. H. ....	Collingwood
Doney, E. H. . . . .	Toronto	Kelly, M. J. ....	Creighton Mine
Dorland, C. ....	Burkton	Lavine, B. . . . .	Toronto
Duff, G. L. . . . .	Hamilton	Lewis, G. A. New Westminster, B.C.	
Eckert, L. C. . . . .	Agassiz, B.C.	Lindzon, M. . . . .	Toronto
Edsall, M. C. ....	Leamington	Logan, G. E. C. ....	Niagara Falls
Epstein, M. D. ....	Toronto	Lymburner, R. . . . .	Hamilton
Fallon, J. A. ....	North Bay	McClinton, Miss I. ....	Terra Nova
Ferreira, S. E. L. ....	Toronto	McIntyre, A. F. . . . .	Owen Sound
Fineman, L. . . . .	Toronto	McTavish, W. A. ....	Toronto
Fitch, F. F. ....	Wolfville, N.S.	Miller, H. G. ....	Galt
Fleming, J. M. . . . .	Toronto	Mitchell, R. M. ....	Honan, China
Gardi, V. A. ....	Sault Ste. Marie	Moffat, F. W. ....	Weston
Garrett, D. R. . . . .	Toronto	Moffatt, T. I. . . . .	Port Arthur
Gee, Miss E. A. . . . .	Gormley	Nicholson, R. E. ....	Waterdown
Glassey, D. W. ....	Toronto	Overholt, A. A. ....	Brantford
Gould, J. . . . .	Toronto	Peer, R. J. ....	Port Credit
Grant, G. H. ....	Limerick, Sask.	Perfect, K. E. ....	Toronto
Grant, Miss M. H. ....	St. Catharines	Perry, A. E. . . . .	Niagara Falls, N.Y.
Greig, C. H. . . . .	Toronto	Pollack, B. ....	Toronto
Greig, F. M. . . . .	Toronto	Pollack, J. ....	Toronto
Gundy, C. L. ....	Toronto	Pusitz, M. ....	Toronto



Name	Home Address
Railton, S. V.	Ayr
Raymers, M.	Toronto
Reiss, H. N.	Toronto
Richardson, Miss G. I. J.	Toronto
Rossiter, J. H.	Sault Ste. Marie
Rossman, I. M.	Toronto
Russell, W. G.	Millbrook
Salkun, D. S.	Toronto
Saunders, W. H.	Toronto
Selby, D. L.	Simcoe
Smillie, I. G.	Toronto
Snell, F. VanV.	Toronto
Sniderman, B. F.	Toronto
Sniderman, S.	Toronto
Stanton, O. L.	Toronto
Steele, F. H.	Dunsford

Name	Home Address
Taylor, H. M.	Bracebridge
Turner, W. A.	Hamilton
Vanderveer, Miss H. L.	Toronto
Walker, A. H.	Allandale
Wallace, J. W.	Goderich
Warren, C. M.	Toronto
Wehr, J. J.	Toronto
Whaley, J. B.	Toronto
White, C. A.	Fenelon Falls
Wilensky, Miss B.	Toronto
Willet, A. W.	Toronto
Wilson, G. E. D.	Weyburn, Sask.
Woodland, L. A.	Toronto
Wright, J. W.	Campbellcroft
Yuill, B.	Gilbert Plains, Man.
Ziegler, H. R.	Brantford

## THIRD YEAR

Angus, L. R.	Toronto
Bassingthwaighe, Miss M. F.	Sault Ste. Marie
Beach, M. L.	Toronto
Belt, T. H.	Toronto
Bone, Miss M. E.	Toronto
Boyle, W. G.	Belwood
Brouks, E. F.	Toronto
Brown, J. E.	Niagara-on-the-Lake
Brown, N. R.	Regina, Sask.
Brown, R. F.	Toronto
Brown, W. G.	Toronto
Browne, W. A.	Toronto
Brownson, C. A.	Belleville
Cairo, Miss M. R.	Toronto
Campbell, D. M.	Toronto
Carswell, J. A.	Toronto
Case, G. L.	Toronto
Caswell, J. W.	Toronto
Cleghorn, R. A.	London
Coutts, M. B.	Assiniboia, Sask.
Craw, Miss C. H.	Fergus
Cummings, E. A.	Thornbury
Dawson, H. S.	Toronto
Denoon, J. W.	Toronto
Duff, G. A.	Drayton
Fisher, A. J.	Stratford
Fletcher, G. M.	Toronto
Flommerfelt, T. E.	Thorold
Gleeson, T. H.	Napanee
Grafton, H. F. P.	Sault Ste. Marie
Gray, K. G.	Toronto
Grey, P. H.	Toronto

Greig, J. W. A.	Seaforth
Guest, W. A.	Ottawa
Haight, Miss R. K.	Waterloo
Hall, Miss M. E.	Toronto
Hall, M. M. R.	Brampton
Hall, W. E. B.	Lindsay
Harvey, J. M.	Exeter
Hawkins, S. J.	Toronto
Healy, D. E.	Toronto
Hethrington, H.	Toronto
Hills, W. H.	Toronto
Hoare, D. S.	Toronto
Horkins, H. A.	Toronto
Hough, H. B.	Amherstburg
Hutner, L. M.	Toronto
James, J. W.	Toronto
Johnston, J. F. A.	Toronto
Johnstone, Miss R. A.	Chatham
Jones, A. H.	Toronto
Keenleyside, E. A.	Regina, Sask.
Kendrick, T. D.	Toronto
Kilpatrick, O. A.	Toronto
Kirkpatrick, G. M.	Vancouver, B. C.
Kirkpatrick, T. C.	Toronto
Kitchen, I. D.	Toronto
Laird, Miss M. D.	Toronto
Laird, R. C.	Toronto
Lambert, A. G.	Beaverton
Large, G. C.	Toronto
Laughton, J. L.	London
Lawson, F. S.	Toronto
Leeder, F. S.	Battleford, Sask.
Leef, C. D. S.	Toronto

Name	Home Address	Name	Home Address
Lewis, L. H. ....	Oshawa	Runstadler, Miss M. ....	Toronto
Lucas, T. A. ....	Sarnia	Rykert, H. E. ....	Dundas
Lyons, J. C. ....	Cheltenham	Shannon, J. G. ....	St Catharines
McCollum, J. L. ..	Toronto	Sharfatz, G. ....	Hamilton
MacFadyen, D. A. ....	Toronto	Shier, J. W. ....	Vancouver, B.C.
MacKechnie, G. S. ....	Toronto	Spackman, R. H. ....	St. Thomas
MacKechnie, H. A. ..	Vancouver, B.C.	Stanbury, R. G. ....	Campbellford
MacLean, K. A. ....	Toronto	Stevens, E. ....	Chesley
McMurray, E. M. . .	Niagara Falls	Stevenson, K. C. ....	Stroud
Macrae, H. M. . .	Vancouver, B.C.	Stogdill, C. G. ....	Toronto
Master, W. M. ....	Windsor	Taylor, G. D. ....	Regina, Sask.
Menzies, Miss I. R.		Thompson, Miss M. J. ....	Toronto
	North Honan, China	Tickett, P. A. ....	Toronto
Meredith, R. H. ..	Vancouver, B.C.	Tilley, A. R. ....	Bowmanville
Montemurro, G. A. ....	North Bay	Turnbull, F. A. ....	Vancouver, B.C.
Moore, E. A. ....	Clarksburg	Verity, G. E. ....	Brantford
Mullen, L. M. ....	Toronto	Wallace, W. M. ....	Toronto
Muscovitch, H. A. ....	Toronto	Walwyn, J. P. ..	Weston
Narofsky, S. ....	Toronto	White, R. G. ....	Moose Jaw, Sask.
Paterson, J. A. ....	Ingersoll	Williams, P. E. ..	Toronto
Price, G. ....	Toronto	Willinsky, B. ....	Toronto
Prior, J. D. ....	Coldwater	Wilson, A. ....	Oakville
Reinhorn, A. J. ....	Toronto	Wilson, J. A. ....	Thorold
Robertson, H. F. ....	Toronto	Woods, W. L. ....	Toronto
Robertson, J. R. ....	Gravenhurst	Wright, E. N. ....	Toronto
Roos, Miss P. M. E. .	Waterloo	Young, A. E. ....	Toronto
Rosen, N. ....	Toronto		

## FOURTH YEAR

Aberhart, W. ....	Seaforth	Craven, A. J. ....	Guelph
Ackland, W. E. ..	Ottawa	Crawford, W. A. ....	Craigsmyle, Alta.
Archibald, D. A. ....	Elora	Crowther, T. A. ....	Niagara-on-the-Lake
Armstrong, J. P. ....	Ottawa	Curry, D. ....	Trenton
Armstrong, L. T. ....	Port Credit	Davidson, J. H. ....	Jarvis
Barker, J. J. ....	North Bay	Dillane, J. G. R. ....	Toronto
Berry, B. H. ....	Toronto	Dinwoody, W. A. ....	Cookstown
Bier, L. B. ....	Brantford	Douglas, L. H. ....	Norval
Borrowman, R. E. ....	Toronto	Edwards, H. E. ....	Listowel
Boorsook, H. ....	Toronto	Elliott, H. R. ....	Hamilton
Bowers, N. H. ....	Massey	Farmer, A. W. ....	St. Catharines
Brown, J. A. ..	Regina, Sask.	Ferguson, C. R. ....	Toronto
Bull, H. T. ....	Holland Centre	Ferrie, K. E. ....	Hamilton
Campbell, A. J. ....	Owen Sound	Fidler, K. A. ....	Toronto
Campbell, C. A. L. .	Toronto	Finlayson, R. A. ..	Dutton
Campbell, Miss G. ....	Chatham	Fraser, Miss I. M. .	Hawkesbury
Campbell, I. P. ....	Grand Valley	Gaudin, F. H. A. ....	
Cannell, D. E. ..	Port Carling		New Westminster, B.C.
Chesney, W. E. ....	Burford	Gordon, D. M. ....	Toronto
Clarke, L. A. ....	Toronto	Gordon, M. K. ....	Caledonia
Colley, A. K. ....	Toronto	Graham, J. M. ....	Goderich

Name	Home Address
Grainger, Miss H. M.	Creemore
Grant, R. C.	Toronto
Green, W. M.	Embro
Hamilton, F. B.	Toronto
Harnick, I.	Toronto
Heffering, R. J.	Toronto
Hilliard, Miss A. M.	Morrisburg
Hoffman, B.	Toronto
Huddart, Miss V. G.	Toronto
Hunt, E. A.	Calgary, Alta.
Hunter, K. T.	Newmarket
Hutton, D. V.	Brantford
Jackson, G. H.	Port Perry
Jeffries, C. N.	Toronto
Kazdan, L.	Toronto
Keith, W. S.	Toronto
Kelly, J. A.	Long Branch
Killoran, V. A.	Peterborough
Kinsman, R. H.	Toronto
Laidlaw, J. B.	Toronto
Linton, F. D.	Port Credit
Little, W. R.	Trenton
Lloyd, P. F.	Brewer's Mills
Luckey, L. E. R.	Toronto
McDermont, R.	Milton
Macdonald, Miss I. M.	Markham
McFarlane, G. M.	Saskatoon, Sask.
McGibbon, K. C.	Toronto
MacNicol, W. T.	Hamilton
MacNiel, A. C.	Oakville
McNiven, E. L.	Victoria, B. C.
Macklin, L. A.	Goderich
Marriott, H. D.	Keswick
Marshall, W. P.	Belleville
Matheson, J. E.	Vancouver, B. C.
Mitchell, D. R.	Oshawa
Morgan, A. L.	Lindsay
Mulock, Miss G. E.	St. Catharines
Murray, P. J.	Cayuga
Noble, T. D.	Toronto
O'Connor, Miss L.	Saskatoon Sask.
Park, W. E.	Fair Ground

Name	Home Address
Patterson, E. B.	Paris
Peacock, H. J.	Toronto
Peeler, D. B.	Toronto
Piper, R. S.	Fort William
Potter, C. W.	Southend
Pugsley, H. E.	Toronto
Ririe, W. B.	Toronto
Robertson, G. S.	Whitby
Robinson, J. B.	Toronto
Roderick, J. H.	Stoney Creek
Rodgers, W. H.	Atlanta, Ga.
Rudolph, C. R.	Toronto
Rutherford, G. H.	Blenheim
Saddington, R. S.	Arnprior
Scott, A. W.	Calgary, Alta.
Scott, W. C. M.	Cannington
Sher, D.	Toronto
Shute, E. V.	Windsor
Skinner, A. M.	Wilsonville
Snelling, C. E.	Welland
Snyder, W. B.	Toronto
Stevens, G. C.	Dunham, Que.
Tansley, E.	Toronto
Taube, E. L.	Toronto
Teskey, S.	Sarnia
Thompson, J. H.	Grand Valley
Thompson, Miss M. S.	Toronto
Uren, J. L.	Toronto
Van Nostrand, F. H.	Vandorf
Warren, W. J.	Weston
Webb, A. J. M.	Hamilton
Weber, W. H.	Kitchener
Webster, J. W. R.	Smith's Falls
Westheimer, J. R.	Boston, Mass.
Wharton, G. K.	Cayuga
White, G. B. Kaifeng, Honan, China	
White, R. A.	North Bay
Williams, J. K.	Beeton
Willscroft, B. A.	Owen Sound
Wood, C. R.	Toronto
Wrong, N. M.	Aylmer
Wyke, D. A.	Trinidad, B. W. I.

## FIFTH YEAR

Adams, J. H. F.	Toronto
Agnew, A. McM.	Vancouver, B. C.
Aikins, L. H.	Wallaceburg
Bain, T.	Toronto
Balfour, G. R.	Toronto
Barclay, L. T.	Claremont
Barker, N. J.	Toronto

Beckett, M. B.	Brantford
Bennett, D. S.	Toronto
Bennett, S. R.	St. Catharines
Best, C. J.	Peterborough
Biehn, S. L.	Parry Sound
Black, L. W.	Hespeler
Borron, R. W.	Toronto

Name	Home Address	Name	Home Address
Boyd, J. H. ....	Toronto	Gung, E. B. ....	Victoria, B.C.
Brebner, W. B. ....	Toronto	Hain, C. W. ....	Toronto
Breslin, R. H. ....	Owen Sound	Ham, A. W. ....	Brantford
Brintnell, F. B. ....	Colborne	Harvie, D. A. ....	Midland
Bull, F. B. ....	Brampton	Hassard, C. E. A. ....	Toronto
Burgess, J. H. ....	Ottawa	Hatfield, W. H. ....	Vancouver, B.C.
Burt, C. F. ....	Brantford	Hemond, C. J. ....	Windsor
Butters, H. L. ....	Niagara Falls	Henné, F. R. ....	Gananoque
Cain, M. C. ....	Huntsville	Hetherington, A. E. ....	Wingham
Cameron, H. M. ....	Ottawa	Higgs, W. D. ....	Albert Head, B.C.
Campbell, I. ....	Toronto	Hisey, R. F. ....	Creemore
Campbell, J. G. ....	Toronto	Hobson, J. P. ....	Niagara Falls
Cari, C. W. ....	Thornton	Hooey, L. ....	North Bay
Carson, W. H. ....	Chatsworth	Hooper, L. N. ....	Little Britain
Chaikoff, J. S. ....	Toronto	Houser, G. F. ....	Toronto
Charlesworth, G. S. ....	Edmonton, Alta.	Howell, Miss H. D. ....	Welland
Clothier, W. J. K. ....	Ottawa	Hudson, L. ....	Toronto
Coates, Miss L. F. ....	Vancouver, B.C.	Huff, R. G. ....	Toronto
Coburn, W. A. ....	Nanaimo, B.C.	Huggard, L. H. A. R.	
Coulthard, H. S. ....	Toronto		Vancouver, B.C.
Cowie, G. A. ....	Brantford	Hurwich, S. B. ....	Toronto
Cumming, G. S. ....	Turnerville	Hyland, H. H. ....	Toronto
Day, Mrs I. T. ....	Toronto	Ireland, J. A. ....	Toronto
Deeton, W. L. ....	Toronto	Irwin, D. A. ....	Toronto
Derbyshire, W. J. B.	Sunnyside, England	James, A. P. R. ....	Toronto
Dickson, B. R. ....	Thamesville	James, G. ....	Vancouver, B.C.
Dorsey, M. C. C. ....	Cookstown	Jamieson, T. J. ....	Ohswegen
Dowsley, G. A. ....	Mallorytown	Jones, G. H. ....	Claremont
Dreyer, J. F. ....	Toronto	Kelly, G. C. ....	Hamilton
Duncan, A. H. ....	Toronto	Kenny, W. G. C. ....	Acton
Easton, N. L. ....	Ayton	Kyles, N. B. ....	Orangeville
Ely, C. W. ....	Beamsville	Lang, L. V. ....	Kitchener
Fairfield, A. B. ....	Beamsville	Leaver, L. R. ....	Port Credit
Farnsworth, J. F. ....	Cannifton	Le Drew, F. ....	Toronto
Ferguson, J. G. ....	Toronto	Little, J. L. ....	Guelph
Fielding, E. M. V. ....	Niagara Falls	Lively, F. M. ....	New Liskeard
Fine, J. M. ....	Toronto	Lowrey, H. E. D. ....	St. David's
Flafluff, E. W. ....	Paris	Lyon, L. A. ....	Oakville
Fleming, Miss E. M.	Donlands, Todmorden	McCallum, J. D. ....	Lloydton
Fleming, F. J. ....	St. Mary's	McCannel, W. A. ....	Chesley
Fowler, A. C. ....	Perth	McCombs, R. D. ....	Dunnville
Fralick, F. T. ....	Thornhill	McCormick, N. A. ....	Walkerville
Gardner, W. J. ....	Midland	McDonald, D. F. ....	Sutton West
Gies, A. H. ....	Hamilton	McDonald, P. W. ....	Colborne
Goodchild, S. F. ....	Toronto	McGee, A. R. ....	Norwood
Goodwin, J. C. ....	Toronto	McGonigle, R. H. ....	Newmarket
Gordon, S. D. ....	Agincourt	McGure, C. T. ....	Merriton
Graham, C. B. ....	Oakwood	MacLachlan, Miss S. R. ....	Toronto
Guay, A. J. L. ....	Calgary, Alta.	McMullen, R. E. ....	Toronto
		McNeely, Miss C. A. ....	Carleton Place
		Maguire, C. E. ....	Saskatoon, Sask.

Name	Home Address
Manaceveth, B. A.	Toronto
Manaceveth, G.	Toronto
Mason, L. W.	Simcoe
Mason, P. W.	Simcoe
Matheson, J. A.	Granum, Alta.
Mayne, J. E.	Drayton
Miller, J. M.	Moose Jaw, Sask.
Moir, H. K.	Toronto
Murdock, D. J.	Markdale
Murray, L. L.	Guy's Hill, Jamaica
Murray, S. S.	Dundas
Nicholson, T. F.	Toronto
Oakes, W. A.	Guelph
Ormerod, M. J.	Toronto
Paul, H. A.	Hasleybury
Peart, H. E.	Burlington
Pember, F. R.	Toronto
Pratt, D. W.	Toronto
Reed, G. E.	Edmonton, Alta.
Reeve-Newson, T.	Toronto
Robertson, R.	Toronto
Robinson, Miss H. S.	Kleinburg
Robson, W. D.	

## New Westminster, B.C.

Ross, H. M.	Vancouver, B.C.
Ross, J. R.	Toronto
Ruby, R. A.	Kemptville
Ruddy, J. O.	Edmonton, Alta.
Ryall, D. B.	Nanaimo, B.C.
Scher, J. N.	Toronto
Scott, R. F.	Toronto
Shaver, C. G.	Alberton
Sidenberg, I. I.	Toronto
Silverthorne, L. N.	St. Thomas
Sinclair, G. A.	Toronto
Sinclair, J. W.	Regina, Sask.
Smith, A. G.	Toronto

Name	Home Address
Smith, Miss F. M.	Glanford
Smith, W. E.	Hamilton
Smitman, M. F.	Toronto
Soskin, S.	Toronto
Sparks, M. I.	Toronto
Stahl, H. F.	Kitchener
Stahl, O. J.	Kitchener
Strebis, D. L. M.	Toronto
Stringer, F. H.	Dawson, Y.T.
Struthers, J. N. P.	Toronto
Stuart, K.	Simcoe
Sullivan, J. A.	Toronto
Swart, H. A.	Simcoe
Sweet, T. A.	Hamilton
Taube, N.	Toronto
Taylor, A. C.	Toronto
Teney, H. F.	Toronto
Thaler, A. F.	Elmwood
Uchida, M.	Vancouver, B.C.
Usher, A. M.	Vancouver, B.C.
Vale, H. E. P.	Toronto
Verner, T. B.	Hamilton
Vivian, R. P.	Barrie
Waddington, H.	Brantford
Watson, J. L.	Toronto
Watt, G. L.	Brantford
Weber, C. R.	Windsor
Welsh, W. K.	Oakland
Whaley, D. W.	Toronto
Wharton, T. V.	Cavuga
White, A. W. M.	Chatham
Whittier, Miss C. L.	

## Elmsdale, Hants, N.S.

Wilcox, L. F.	Beeton
Wilkins, W. R.	Toronto
Wilson, A. K.	Regina, Sask.
Winch, L. B.	Hazelton, B.C.

## SIXTH YEAR

Abell, R. S.	Owen Sound
Alexander, H. J.	Norwich
Amyot, G. F.	Ottawa
Armstrong, J. C.	Ottawa
Baker, F. E.	Belleville
Ball, W. M.	Toronto
Beasley, J. H.	Toronto
Beatty, S. R.	Tweed

Best, C. H.	Toronto
Bicknell, H. E.	Toronto
Birch, J. R.	Calgary, Alta.
Boyd, B.	Hamilton
Brady, F. A.	Toronto
Brillinger, F.	Stouffville
Brummitt, R. B.	Vancouver, B.C.
Cameron, J. M.	Toronto

Name	Home Address	Name	Home Address
Campbell, G. D. G.	Toronto	McCartney, T. G.	Bethany
Carscadden, W. G.	Lindsay	McFadden, J. L.	Victoria, B.C.
Catherwood, W. L.	Hagersville	MacGowan, G. A.	Toronto
Cheney, Miss M. J.	Ottawa	McGregor, G. W.	Inglewood
Chu, P. Y. Y.	Vancouver, B.C.	McIntosh, J. S.	St Catharines
Clark, D. V.	Toronto	McKay, D. R.	Stayner
Couch, J. H.	Strathroy	Mackay, R. P.	Toronto
Coutts, G. S.	Bradford	MacLean, D. L.	Harriston
Cray, J. F.	Guelph	May, C. R.	Meifort, Sask.
de Souza, M. G.	New Amsterdam, Berbice, Br Guiana	Menzies, F. H.	Burks Falls
Deyell, J. S.	Peterborough	Middlebro, J. P.	Owen Sound
Dill, J. L.	Dublin	Miller, J. W.	Castleton
Duncan, Miss J. R.	Chatham	Miller, W. H.	Toronto
Fair, G. L.	Toronto	Mills, Miss G.	Toronto
Falconer, J. G.	Toronto	Milne, J. E.	Elmwood
Fenton, W. K.	Toronto	Milne, R. E. A.	Niagara Falls
Feick, T. B.	New Hamburg	Mitchell, C. L.	Victoria, B.C.
Fielden, E. C.	Toronto	Mitchell, H. D.	Victoria, B.C.
Forrest, S. J.	Toronto	Monaghan, H. J.	New Hamburg
Forster, Miss M. B.	Corunna	Muir, W. S.	Niagara Falls
Fraser, Miss F. H.	York Mills	Murchison, E. B.	Cambay
Gerow, G. H.	Colborne	Naden, J. R.	Victoria, B.C.
Graham, W. L.	Galt	Nicholson, Miss M. A.	Lucknow
Gray, H. M.	Toronto	Noble, E. C.	Toronto
Gray, T. W. A.	Millbrook	Paterson, J. C.	Sarnia
Green, J.	Toronto	Patry, F. L.	Toronto
Greenberg, J. H.	Toronto	Perry, Miss F. E.	Victoria, B.C.
Greer, H. J.	Port Coquitlam, B.C.	Plewes, F. D.	Toronto
Hacking, L. C.	New Westminster B.C.	Potter, H. F.	Clinton
Hakstian, A.	Brantford	Riley, R. C.	Welland
Hamilton, F. C.	Toronto	Roach, C. J.	Vancouver, B.C.
Hare, M. A.	Britannia Heights	Robinson, L. E.	Aurora
Heaton, T. G.	Toronto	Rudd, M. S. K.	Foley
Heggie, D. C.	Brampton	Rumball, W. C.	St. Catharines
Henderson, D. N.	Toronto	Russell, W. H.	Toronto
Hodd, D. G.	Hamilton	Schwab, J.	Toronto
Horton, C. B.	Toronto	Seltzer, E. I.	Toronto
Hume, T. W. K.	Toronto	Senn, J. N.	Caledonia
Hurst, D. D.	Fullerton	Sher, Miss L.	Toronto
Jackson, J. E.	Auburn	Shipley, M. A.	Clinton
Jaquith, L. E.	Toronto	Singer, Miss M.	Toronto
Johnston, W. C.	Exeter	Smith, R. G.	Hickson
Kelly, A. D.	Toronto	Soanes, E. P.	Aurora
Knowlton, C. E.	Toronto	Steele, T. M.	Stratford
LeFurgey, J. A.	Toronto	Stillman, I. W.	Toronto
	North Bedeque, P.E.I.	Strain, F. A.	Gore Bay
Landis, N.	Toronto	Strangway, W. E.	Petrolia
Landsborough, A. M.	Port Credit	Sutherland, L. J.	Holland Centre
Laxton, J. E., Jr.	Toronto	Syer, G. E.	Fraserville
McCarthy, K. C.	Toronto	Teasdale, H. R.	Massey
		Trick, H. W.	Oshawa

Name	Home Address	Name	Home Address
Vine, G. D. ....	London	Williamson, F. M. ....	Priceville
Vokes, H. A. S. ....	Toronto	Williamson, G. S. ....	Toronto
Walker, J. E. New Westminster, B.C.		Wilson, C. H. ....	St. George
Westman, E. R. ....	Toronto	Wilson, Miss M. E. ....	Toronto
White, C. O. ....	Toronto	Wolfson, H. ....	Toronto
Wiley, W. R. D. ....	Toronto		

## CANDIDATES FOR THE DIPLOMA OF PUBLIC HEALTH

Eagles, Dr. G. H. ....	Riddell, Dr. A. R. ....	Toronto
George, Dr. W. E. ....	Sneath, Dr. P. A. T. ....	North Bay
Graham, Dr. A. H. ....	Sutton, Dr. N. H. ....	Peterborough
Colorado Springs, Col.	Warren, Dr. C. A. ....	Toronto

## CANDIDATES FOR THE DEGREE OF B.Sc. (MED)

Boyd, Dr. Gladys L. ....	Johnstone, Dr. B. I. ....	Toronto
Brown, Dr. M. H. ....	Meekison, Dr. D. M. ....	Tara
Graham, Dr. R. W. ....		Vancouver, B.C.

## GRADUATE STUDENTS

McCallum, Dr. A. ....	Thompson, Dr. H. D. ....	Toronto
Mortimore, Dr. M. C. ....	Podnos, Dr. A. ....	Toronto
Stewart, Dr. A. E. ....	Wilfinsky, Dr. A. I. ....	Merlin

## CANDIDATES FOR THE DIPLOMA IN RADIOLOGY

Hague, Dr. O. G. ....	Shannon, Dr. E. H. ....	Toronto
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## OCCASIONAL STUDENTS

Johnson, R. W. ....	Quinney, C. T. ....	Toronto
Park, T. D. ....		Logan, Utah

## SUMMARY

First Year .....	105
Second Year . . . . .	116
Third Year . . . . .	117
Fourth Year . . . . .	124
Fifth Year .....	185
Sixth Year . . . . .	127
D. P. H. ....	7
B. Sc. (Med) . . . . .	5
Graduate . . . . .	6
Diploma of Radiology . . . . .	2
Short Course in Radiology .....	1
Occasionals .....	3

## FACULTY OF APPLIED SCIENCE AND ENGINEERING

## FIRST YEAR

Name	Home Address	Name	Home Address
Adamson, G. S.	Orangeville	Hunt, A. B.	London
Allan, D. C.	Camlachie	Jeckell, W. H. R.	Dawson, Y. T.
Andrew, G. L.	Toronto	Johnston, W. E.	Toronto
Annesley, J. C.	Toronto	Jones, S. C.	Toronto
Archer, J. E.	Port Arthur	Kearns, E.	Toronto
Barnes, R. I. P.	Summersland, B. C.	Kirkpatrick, H. J.	Toronto
Battye, A. R.	Swanage, Dorset, Eng.	Klein, G. J.	Hamilton
Beal, G. P.	Toronto	Laidlaw, D. S.	Toronto
Belyea, G. H. V.	St. John, N.B.	Langford, J. M. H.	Toronto
Bertram, R. E.	Toronto	Lazier, J. M. C.	Toronto
Blight, D. E.	Toronto	Linke, H. M.	Kitchener
Boehm, C. R.	Toronto	Little, J. G.	Trenton
Bolton, A. E. S.	Toronto	Little, T. E.	Owen Sound
Bouckley, T.	Oshawa	Loscombe, V. G.	Toronto
Brook, J. W.	Toronto	Lymburner, K. W.	Cayuga
Brooks, C. H.	Toronto	Macdonald, W. C.	Toronto
Burk, C. F.	Toronto	McKenzie, D. J.	Toronto
Caldwell, W. C.	Powassan	McKinney, A. D.	Toronto
Calnan, E. J.	Vernonville	MacKinnon, C. E.	Cranbrook, B. C.
Campbell, W. M.	Toronto	McLinden, A. J.	Owen Sound
Carlisle, D. C.	Toronto	Magnan, H. N.	Kingston, Jamaica
Clapperton, T. C.	Toronto	Martin, F. J.	Milton
Clark, G. M.	Toronto	Mathers, J. M.	Toronto
Cockburn, L. F.	Crysler	Moodie, E. W.	Toronto
Colwell, A. R.	Toronto	Moogk, E. G.	Weston
Corbett, J. B.	Toronto	Morgan, E. C.	Toronto
Corman, J. M.	Caledonia	Morrison, J. A.	Beaverton
Dill, E. W.	Toronto	Morton, P. S. A.	Toronto
Dodge, A. H.	Toronto	Nicholson, V. L.	Midland
Duncan, W. A.	Toronto	Patterson, C. F.	Ripley
Dyment, J. T.	Toronto	Peterson, R. R.	Hamilton
Eadie, W. C.	Toronto	Perry, A. H.	Toronto
Ellis, A. B.	Leamington	Pritchard, H. T.	Toronto
Emerson, L. P.	Toronto	Ray, R. W.	Toronto
Faber, C. W.	Toronto	Robertson, R. G.	Hamilton
Forer, H.	Palestine	Rooke, W. A.	Toronto
Frye, G. D.	Wallaceburg	Rowan, A. H.	Toronto
Furber, C. M.	Irapuato, Gto. Mex.	Russell, J. H. P.	Toronto
Furber, M. B.	Irapuato, Gto. Mex.	Ryan, J. H.	Orillia
Gibson, N. C.	Oakville	Scriven, M. R.	Toronto
Glass, J. E.	Richmond Hill	Sheldon, W. D.	Galt
Grant, A. M.	St. Catharines	Shenstone, B. S.	Toronto
Grunsten, W. A.	Toronto	Sinclair, A. E.	Woodstock
Hall, S. W. S.	Toronto	Sipes, A. M.	Toronto
Hannon, Miss D. C.	Hamilton	Skey, H.	Toronto
Hawtrey, R. C.	Toronto	Smith, H. C.	Wiarton
Hays, R. E.	Cannington	Smith, L. A.	Sault Ste Marie
Hermance, H. P.	Toronto	Somerville, A. A.	Orono
Hilchie, W. F.	Weston	Stanford, G. E. H.	Toronto
Hill, J. F.	Regina, Sask.	Stechyshyn, J. W.	Fort William
Howard, L. A.	Toronto	Stephenson, H. J.	Burlington



Name	Home Address	Name	Home Address
Swartman, T. C.	Waubaushe	Weinert, I	Toronto
Switzer, R. J.	Orillia	Weldon, R. V.	Barrie
Taber, A. W.	Athens	Westervelt, R. A.	Clarkson
Thompson, C. P.	Toronto	White, W. E.	Toronto
Trimble, G. F.	Toronto	Wickham, G. E. F.	Toronto
Vigars, S. G.	Port Arthur	Wilson, F. A.	Toronto
Walton, R. G.	Toronto	Wolfe, S. E.	Cooksville

## SECOND YEAR

Allen, N. E.	Ingersoll	Hallier, R. G.	Toronto
Baker, G. F.	Toronto	Holden, G. A.	Toronto
Ballachey, A. G.	Brantford	Hopper, C. M.	Elora
Barnes, L. W.	Toronto	Howell, J. E.	Welland
Barr, F. G. F.	Toronto	Hughes, G. J.	Drayton
Bentley, W. A.	Toronto	Hunter, A. F.	Toronto
Bohn, L. J.	Guelph	Irwin, A. J.	Toronto
Boles, H. W.	Toronto	Irwin, H. F.	Toronto
Braithwaite, K. H.	London	Jackson, E. D.	Toronto
Brooks, H. G.	Toronto	Jones, J. H. M.	Sault Ste. Marie
Bryan, H. H.	Harriston	Killoran, J. L.	Peterborough
Burns, W. G.	Toronto	King, L. Y.	Simcoe
Burnside, R. J.	Madoc	Lalor, Miss E. M.	Toronto
Carrick, J. A.	Toronto	Laughlin, W. H. M.	Toronto
Carroll, C. J. G.	Ottawa	Lee, A. C.	Dawson, Y.T.
Carruthers, C. D.	Garden Hill	Lorenzen, I.	St. Catharines
Cash, E. A.	St. Thomas	McCrone, D. G.	Toronto
Chamberlain, E. E.	Port Credit	McCullough, W. H.	Toronto
Chisholm, W. D. A.	Oakville	McGregor, H. R.	Toronto
Clapp, D. M.	Port Credit	McIntosh, W. R.	Toronto
Clarke, W. R.	Oshawa	McMartin, C. A.	Barrie
Connery, J. H.	Toronto	MacGill, Miss E. M. G.	Vancouver, B.C.
Connor, G. R.	Campbellford	Martin, W. C.	Toronto
Cooke, W. L.	Toronto	Morris, D. T.	Grimsby
DeLaplante, G. L.	Owen Sound	Nichols, W. A.	Toronto
Eastwood, D. R.	Bonar Law	Overell, H. M.	Hamilton
Edmonson, C. B.	Welland	Parker, G. H.	Guelph
Enouy, W. G.	Toronto	Parkinson, C. A.	Toronto
Farrell, J. B.	Toronto	Perley, E. C.	Wolseley, Sask.
Feely, M. R.	Brantford	Phipps, A. R.	Richmond Hill
Flinthoff, A. F.	Oshawa	Pitt, C. B.	Collingwood
Ford, J. S.	Toronto	Pouncett, F. H. R.	Toronto
Fraser, J. H.	Streetsville	Quance, R. P.	Delhi
Gardner, J. K.	Toronto	Raymore, W. G.	Toronto
George, J. W.	Dorchester	Richardson, J. M.	Toronto
Granton, T. J.	Paris	Richardson, L. A.	Peterborough
Grass, E. C.	Columbus	Richardson, R. E.	Toronto
Gray, G. M.	Toronto	Riches, C. H.	Streetsville
Grogan, K. C.	Brampton	Rickard, P. A.	Waterford
Grundy, E.	Toronto	Roberts, G. L. B.	St. John's, Nfld.
Haggert, G. J.	Ingersoll	Robins, C. P.	Toronto
Hanks, R. S.	Toronto	Rochester, R. B.	Toronto
Hanna, A. L.	Port Carling	Rowland, D. A.	Toronto
Harrington, J. C.	Toronto	Ruggle, H. P.	Toronto
Hayward, R. E. G.	Haileybury	Salter, C. J.	Clinton
Heald, G. C.	Toronto		

Name	Home Address	Name	Home Address
Sanderson, E. L. . . .	Toronto	Spittal, W. R. . . .	Toronto
Sankey, C. A. . . . .	Belleville	Stanley, P. G. . . .	Toronto
Scarth, W. M. . . . .	Verdun	Thompson, M. O. . .	Atwood
Scott, N. G. . . . .	Toronto	Thomson, W. . . . .	Belton
Sheak, H. F. M. . . .	Toronto	Vercoe, F. H. . . . .	Toronto
Sherk, R. M. . . . .	Humberstone	Vernon, H. . . . .	Toronto
Shields, W. F. . . . .	Innerkip	Watson, W. A. . . .	Toronto
Shore, L. E. . . . .	Meaford	Weaver, W. E. . . .	Hespeler
Shortreed, J. . . . .	Toronto	Weber, R. I. . . . .	Zurich
Sievert, F. A. . . . .	Toronto	Whaley, W. . . . .	Harrison
Simmons, W. R. . . .	Bracebridge	Wideman, N. E. . . .	Markham
Sinclair, S. K. . . . .	Toronto	Wilkinson, A. E. . .	Toronto
Smith, G. B. . . . .	Toronto	Willard, E. G. . . .	Hamilton
Smith, H. M. . . . .	Sault Ste Marie	Wilson, A. M. . . . .	Hamilton
Smith, T. B. . . . .	Toronto	Wilson, R. J. G. . .	Toronto

## THIRD YEAR

Adams, W. D. . . . .	Toronto	Griffith, H. D. . . .	Toronto
Anderson, J. G. . . .	Toronto	Grime, L. . . . .	Royal Oak, Mich
Anderson, W. . . . .	Stratford	Hansen, W. H. . . .	Gravenhurst
Angus, W. M. . . . .	Fort William	Hawken, J. D. . . . .	Wallaceburg
Armour, C. A. V. . . .	Toronto	Hawkins, R. M. . . .	Toronto
Auld, J. R. . . . .	Beamsville	Heard, C. G. . . . .	St. Thomas
Auld, W. F. . . . .	Beamsville	Heron, B. . . . .	Toronto
Bailey, E. T. W. . . .	Lakefield	Hewitt, H. L. . . . .	Toronto
Ballard, A. H. . . . .	Niagara Falls	Hobden, B. J. . . . .	Toronto
Banwell, S. B. . . . .	Sarnia	Hyde, H. . . . .	Cobalt
Barrington, J. D. . . .	Toronto	Irvine, W. A. . . . .	Toronto
Beam, D. C. . . . .	Stevensville	Jeffrey, J. M. . . . .	Toronto
Beck, J. B. . . . .	Merritton	Jennings, G. L. . . .	Toronto
Bicknell, A. B. . . . .	Toronto	Johnson, M. H. . . .	Humber Bay
Brown, A. . . . .	Walkerville	Jones, S. M. . . . .	Brantford
Brown, H. F. . . . .	St. Catharines	Kadota, K. . . . .	Toronto
Bruce, C. F. W. . . .	Toronto	Kellam, B. . . . .	Toronto
Cade, J. G. . . . .	St. Mary's	Kelman, J. A. . . . .	St. George
Chorolsky, E. . . . .	Regina, Sask	Kilmer, G. E. . . . .	Southampton
Clark, R. M. . . . .	Toronto	Kimbell, H. P. . . .	Moose Jaw, Sask
Complin, E. R. . . . .	Toronto	Kirkpatrick, W. S. . .	Ottawa
Connolly, E. F. . . . .	Collingwood	Kiibs, W. H. . . . .	Hespeler
Davis, E. G. . . . .	Toronto	Lally, C. K. . . . .	Barrie
Dick, J. P. . . . .	Weston	Legge, T. A. T. . . .	Oak Ridges
Dickson, A. D. . . . .	Campbellford	Leitch, K. D. . . . .	Toronto
Douglas, A. J. . . . .	Cayuga	Limage, J. S. . . . .	Hamilton
Dow, D. W. . . . .	Enderby, B.C	Lougheed, E. H. . . .	Toronto
Duncan, J. P. . . . .	Brantford	McColl, F. H. . . . .	Brighton
Feick, C. G. E. . . . .	Warton	McCullough, J. F. K.	Peterborough
Fisher, R. A. . . . .	Toronto	McCullough, J. R. . .	Toronto
Flett, D. D. . . . .	Toronto	McGure, C. H. . . . .	Cornwall
Fraser, K. W. . . . .	Pembroke	McLaughlin, H. M. . .	Sutton West
Garnham, F. T. . . . .	Tillsonburg	McLean, D. J. . . . .	London
Gaudin, E. L. . . . .	Toronto	Magill, J. J. . . . .	Brampton
Gooderham, R. M. . .	Meadowvale	Marshall, O. C. J. . .	Toronto
Gordon, M. B. K. . . .	Dixie	Matthew, I. D. . . . .	Georgetown
Grant, A. G. . . . .	Toronto	Menzies, J. R. . . . .	Farrington Hill
Griffin, K. . . . .	Toronto	Morrison, C. A. . . .	Toronto

Name	Home Address	Name	Home Address
Noble, J. S	Cranbrook, B C	Shipman, C. B....	Winnipeg, Man
Nugent, C E	London	Smythe, R. E	Merritton
Oke, A	Seaforth	Soucy, C. I	Toronto
Paisley, S R	Toronto	Sudden, E A	Galt
Paquette, J A	Peterborough	Sumner, N S	London
Patterson, F H	Niagara Falls	Sutton, A F	Dorchester
Pearson, J. W.	Toronto	Suzuki, S	Tokyo, Japan
Piper, R. L	Calgary, Alta	Switzer, H. R	Toronto
Pollock, C A	Kitchener	Tate, G. H	Newmarket
Quinlan, H. D	Barrie	Thompson, W L	Belmont
Ramsay, W. M	Toronto	Tuck, A. E	Freeman
Raymant, F G	Southampton	Warner, F R	Thorold
Robertson, R. M	Toronto	White, J. A	Toronto
Roper, J B	Ottawa	Wigle, A	Amherstburg
Rumble, G	Hillsdale	Wilson, R. C	Port Hope
Russell, G A	Hamilton	Wren, R C	Russia
Sampson, F. A	Toronto	Witherell, C. W	Wallaceburg
Sangster, F. A	Stouffville	Yuill, S. W	Brussels
Saunders, H. E	Oshawa		

## FOURTH YEAR

Ahara, L D	Toronto	East, L A W	Stratford
Allan, J. C	Toronto	Fawcett, W L	Sarnia
Atkinson, C. S	Haileybury	Fowhe, G H	Belleville
Baker, M. H	Goderich	Frampton, A. H	Toronto
Beaman, A. E	North Gower	Gordon, C. W	Winnipeg, Man
Beatty, G A	Cannington	Graham, T. C. G	Inglewood
Booth, C. A	Toronto	Griffith, B. C	Toronto
Boyd, O. H	Toronto	Harrop, A. C	Calgary, Alta
Boyes, J W	Hamilton	Hill, A J	Toronto
Bridge, J. F.	Kincardine	Hobbs, E. B.	Los Angeles, Cal
Brown, H. R	Toronto	Horwood, E. C	Toronto
Browne, L M	Toronto	Hunter, L N	Brampton
Bruce, D	Tavistock	Inglis, G F.	Hamilton
Buchmann, K E	Toronto	Ings, J. H	Vancouver, B.C
Burbank, J. D	Toronto	Jackson, T. W	Toronto
Burpee, L H	Ottawa	Jeckell, A. W	Dawson, Y.T
Cameron, W. J	Toronto	Jenkins, T. H.	Toronto
Campbell, W. J	Ridgetown	Johnson, J. L	Athens
Carruthers, W R	Toronto	Kennedy, J. W	Hamilton
Cathcart, S. V.	Courtright	Kerr, R. S	Toronto
Chowen, W. R	Clinton	King, V. B	Woodstock
Cliphsham, W. B	Sparrow Lake	Kirn, K. A	Peterborough
Coates, W. H.	Seaforth	Leadbetter, J. B. S.	Toronto
Coppin, C. A	Black Rock, Barbadoes	Lee, D. A S	Toronto
Coulter, W. W. H	Toronto	Lillie, V B	Toronto
Crane, W. A	Aylmer	Lindsay, J	Georgetown
Crossgrove, G. M. M.	Copper Cliff	Little, E. M	Iroquois Falls
Curry, G. R	Toronto	Lloyd, D. S	Sault Ste. Marie
Cuthbert, A. B	Lindsay	Lloyd, W G	Hamilton
Davidson, P C	Toronto	McBride, R. L	Iona Station
Dillane, C. W	Kemptville	McBrien, R. E	Peterborough
Domn, E. C.	Ayton	McColl, J. A	Toronto
Dowler, E. A	Galt	MacEwen, P. B	Craik, Sask
Dunbar, W. H	St. Mary's	MacKendrick, J. N	Galt

Name	Home Address	Name	Home Address
McKenna, W. G. G	London	Shaw, F. A. C.	Wallaceburg
Mackenzie, W. J.	Port Robinson	Shaw, W. U.	Manitowaning
Maclean, C.	Toronto	Shurly, E. C.	St Catharines
McMaster, W. D.	Hamilton	Smart, G. W.	Toronto
McNab, J. B.	Gravenhurst	Smith, H. C.	Toronto
Macpherson, N. E.	Cornwall	Smyth, A. R.	Toronto
MacQueen, A. J. F.	Sault Ste. Marie	Somerville, K. R.	Wanstead
Manuel, F. R.	Toronto	Sorby, W. O.	Guelph
Mason, H. R.	Toronto	Steele, W. H.	Toronto
Maxwell, J. O.	St Mary's	Stephens, G. A.	Clarkson
Melick, D. L.	Dunnville	Strickland, V. D'E.	Hamilton
Miller, H.	Regina, Sask	Sullivan, G. B.	Guelph
Millican, J. F.	Medicine Hat, Alta	Takaba, S.	Shimane Ken, Japan
Milne, F. J.	Belton	Tanton, J. F.	London
Milne, J. M.	Belton	Taylor, R. E.	Toronto
Morton, A. D.	Oakville	Teagle, R. W.	Toronto
Murphy, H. T.	Brookfield, N.S	Thomson, W. H.	Toronto
Nichol, W. E.	Brantford	Toye, A. M.	Toronto
Osburn, M. P.	Batteaux	Tribble, G. B.	Bolton
Papst, H. W.	Amherstburg	Trotter, H.	Calgary, Alta
Parker, K. F.	Humberside	Turnbull, A. D.	St. Mary's
Patterson, T. M.	Kincardine	Turner, W. I.	Toronto
Pearen, J. E.	Toronto	Van Horne, C. H.	St. Thomas
Peart, A. W. M.	Aldershot	Voaden, G. H.	St. Thomas
Pentelow, H. M. S.	Guelph	Waines, R. T.	Toronto
Perry, S. W.	Owen Sound	Watt, E. B.	Ottawa
Phelps, M. W.	Merritton	Wallis, F. J.	Clinton
Pike, J. G.	Humber Bay	Watson, F. W.	Elmira
Polack, D. L.	Toronto	Wells, T. H.	Waterloo
Potter, C. E.	Toronto	Wellwood, F. E.	Richmond Hill
Pritchard, W. R.	Toronto	Whatmough, F. R.	Stratford
Ratz, H. G.	Kitchener	White, P. S.	Toronto
Rowland, S. A.	Mount Albert	Whitton, H. G. G.	Toronto
Ryan, J. W.	Georgetown	Wright, W. E.	Port Credit
Ryne, J.	Toronto	Wyatt, D.	Toronto

## SUMMARY

First Year	116
Second Year	121
Third Year	113
Fourth Year	138
Total	488

## FACULTY OF HOUSEHOLD SCIENCE

## FIRST YEAR

College Name	Home Address	College Name	Home Address
C Anglin, Miss F G	Toronto	C Suzuki, Miss N	Tokyo, Japan
C Clarke, Miss D W.	Harrow	C Taylor, Miss W. L	New Liskeard
C Davis, Miss C L	Toronto	C Tocher, Miss K...	Sunderland
C Elliott, Miss E C	Toronto	*C Ussher, Miss M. F	Toronto
V Gunton, Miss M. H.	Simcoe	C Wales, Miss R E	Toronto
C Kaake, Miss M. J	Toronto	V Walker, Miss H. L.	Toronto
C Lacey, Miss H	Chesterville	V Whyte, Miss M E	Toronto
C MacKinnon, Miss R	St. Catharines	C Wilson, Miss H	Toronto
C Riddell, Miss M E.	St. Catharines	V Young, Miss W. F.	Minesing
V Service, Miss F. A			

Chentu, Szechewan, West China

## SECOND YEAR

C Moffatt, Miss W. M.	Toronto	V Nichol, Miss A. J...	Madoc
C Montgomery, Miss F. M	Glen Ellyn, Ill	C Somers, Miss I. B.	Toronto

\*Michaelmas Term.

## SUMMARY

## FIRST YEAR

University College	14
Victoria College	5
Total.....	19

## SECOND YEAR

University College.	3
Victoria College	1
Total	4
Grand Total.....	23

## ONTARIO COLLEGE OF EDUCATION

## STUDENTS REGISTERED FOR ORDINARY HIGH SCHOOL AND SPECIALISTS' CERTIFICATES

Name	Home Address	Name	Home Address
Adams, A. H. S.	Toronto	Carnahan, Miss R.	Toronto
Adams, Miss N. G.	Toronto	Carter, Miss R. A.	Galt
Ainslie, G. D.	St. Marys	Case, Miss M. A.	Woodstock
Allen, T. B.	Toronto	Chambers, Miss E. C.	Toronto
Allison, Miss J. L.	Walkerville	Chambers, F. W.	Westmount, Que.
Anderson, Miss C. E. H.	Toronto	Chambers, Miss M. L.	Fenelon Falls
Anderson, C. M.	Wilton Grove	Chapman, G. H.	Hespeler
Appleyard, C. E.	Woodstock	Clarke, Miss H. G.	Belleville
Archibald, A. D.	Toronto	Cleaver, Miss H. J.	Burlington
Armstrong, Miss J. L.	Kinburn	Cockburn, A. B.	Puslinch
Ash, Miss E. A.	Toronto	Cocks, Miss L. A.	Winona
Attridge, C. G.	Waterdown	Conn, K. B.	Toronto
Attridge, Miss C. B.	London	Cooke, L. H.	Toronto
Augustine, Miss H. G.	Port Colborne	Copping, Miss M. E.	Fort William
Bailey, Miss E. C.	Toronto	Costello, Miss M.	Downeyville
Baird, Miss K.	Chatham	Cray, Miss M. B.	Guelph
Baker, J. W.	Toronto	Cryan, W. C.	Stratford
Bart, P. J.	Toronto	Cuddy, Miss W. E.	Amherstburg
Bartram, Miss J.	Parkhill	Culham, Miss M.	Islington
Beecroft, Miss C. I.	Toronto	Cummings, R. C. R.	Toronto
Beers, Miss A. E.	Belfountain	Curtis, Miss B. S.	Havelock
Bell, J. W.	Corunna	Curtis, Miss E. R.	Toronto
Bennington, Miss E. M.	Prescott	Cuthbertson, J. A.	Perth
Berry, F. B.	Toronto	Cutler, I. T.	Mimico Beach
Best, Miss A. G.	Ottawa	Davies, Miss K. M.	Toronto
Bird, J. N.	Georgetown	Deagle, R. R.	Brantford
Bluett, Miss G. V.	London	Denis, J. A. P.	Pendleton
Bovaird, Miss G.	Brampton	Depew, Miss M. E.	Paris
Bowers, Miss E. L. B.	Sulphide	Dick, W. J.	Selkirk
Brabazon, Miss B. K.	Lucan	Doig, W. P.	Wroxeter
Breuls, C. P.	Toronto	Dore, J. W.	Toronto
Brien, Miss G. E.	Ridgetown	Douglas, Miss D. M.	Wallacetown
Briggs, J. B.	Owen Sound	Duchesneau, J. A.	Morewood
Brislin, Miss J. M.	Harriston	Duncan, Miss M. P.	Westport
Broddy, H. H.	Toronto	Dunn, M. S.	Old Chelsea, Que.
Brodic, Miss L. T.	Toronto	Dwyer, W. J.	Toronto
Bruce, V. N.	Toronto	Dyce, H. G.	St. Thomas
Bue, A.	Stayner	Edmison, Miss L. E.	Brandon, Man.
Burke, Miss E. M.	Ottawa	Edmonds, Miss M. B.	St. Thomas
Burke, J. V.	Toronto	Edwards, Miss M. S.	Gananoque
Burke, W. L.	Toronto	Egan, Miss J. I.	Ottawa
Burleigh, Miss N.	Stella	Eldon, F. I.	Toronto
Burnett, W. R.	Stratford	Elliot, Miss J. B.	Peterborough
Burwash, Miss C. F.	Toronto	Elliot, Miss O. E.	Toronto
Byles, S. R.	Toronto	England, Miss G. M.	Fergus
Cain, Miss E. A.	Cobalt	Epplert, T. M. A.	St. Marys
Cameron, Miss L. J.	Fort William	Evanson, Miss R. A.	Prescott
Cameron, O. E.	Ottawa	Everest, T. E.	Toronto
Campbell, N.	Cedarville	Fair, H. A.	Toronto
Carl, Mrs. E. G.	Stirling	Fawcett, Miss M. B. R.	Toronto

Name	Home Address	Name	Home Address
Fenwick, Miss M. M	St. John's, Nfld.	Janes, Miss D. L.	London
Ferguson, E	Sarnia	Johnston, J. E.	Perth
Ferguson, Miss M. H	Vernon	Johnston, Miss M. W	Hamilton
Field, Miss R. T	Beamsville	Jones, Miss E. M. C	Southwold
File, R. R.	Toronto	Jones, Miss V. I	Parry Sound
Foster, Miss M. G	Listowel	Kavanagh, Miss A. M	Penetanguishene
Freeman, B. C	Brighton	Kennedy, Miss B. A	Collingwood
Freeman, Miss O	St. George	Kennedy, Miss E. J	Toronto
Fry, Miss M. C	Dunaville	Kennedy, G. N	Toronto
Fuller, Miss A. L	Sarnia	Kingsburgh, J.	Toronto
Gamble, R. B	Ottawa	Kingston, E. F	Toronto
Gardiner, Miss A. C. E	Mount Forest	Kinton, T. L. D	Toronto
Garvey, W. F	Toronto	Kirkland, M. F	Almonte
Gaviller, A. R. M.	Toronto	Kramer, H. O	Toronto
Gerrie, Miss M. H	Ingersoll	Laird, A. M	Norval
Gibson, J. A	Gibson, J. A	Lajeunesse, A.	Hull, Que.
Gibson, Miss F. E. P	Oakville	Lambertus, J. J	Eganville
Gilmour, Miss H. M	Toronto	Lamoureux, Miss F.	Granby, Que.
Glenn, Miss E. M	Stella	Lane, Miss A. M	Orangeville
Gothard, Miss M. M	Trenton	Lane, Miss B. B	Prescott
Graham, E. H	Toronto	Langford, W. F	Lucan
Graham, Miss M. A	Kingston	Law, R. M	Toronto
Grange, G. S	Napanee	LeBel, E. C	Toronto
Grant, G. S	Guelph	Lenz, Miss M. M	Bartonville
Gravelle, Miss E. N	Toronto	Little, Miss R. M	Proton Station
Gray, Miss A. M	Listowel	Lodge, Miss H. M	Wasaga Beach
Gray, A. S	Toronto	Loggie, Miss D. C	Chatham, N.B.
Griffith, Miss B. M	Toronto	Lowrey, R. E	Toronto
Griffith, Miss M. I	Changteho, China	MacAlpine, Miss M. S	MacAlpine
Groat, F. R	Norwich	McClelland, T. H	Toronto
Groat, M. E	Norwich	McCormick, Miss E. A. H	London
Groh, I	Preston	McCready, Miss M. L	Toronto
Hale, A. I	London	McCredie, Miss A. D	Ottawa
Haliday, Miss H. A	Lanark	McDiarmid, L. P	Moose Creek
Hambly, Miss D. S	Ottawa	MacDermid, Miss E. C	Martintown
Hampson, Miss D. H	St. Catharines	Macdonald, Miss C. G.	Govan, Sask.
Hann, S. W	Milton	McDonald, Miss C	Niagara Falls
Harrison, Miss M	Picton	McFadden, A. P	Sault Ste. Marie
Harston, J. C	Toronto	MacFarlane, Miss J. M	Southwold
Hassard, Miss G. G	Toronto	McGeachy, Miss M. A	Sarnia
Hastie, W. J. A.	Sheguiandah	MacGillivray, Miss E. B	Toronto
Hastings, Miss F. D.	Toronto	McGregor, Miss H. D	Waterdown
Hastings, Miss M. D.	Aurora	McInnes, S.	Toronto
Hicks, F. F	Stouffville	McKay, D. L. G	Elmira
Higgins, Miss E. A	Clinton	McKay, Miss G. H	Toronto
Hill, E. A	Norwood, Man.	McKeever, Miss M. E	Brockville
Hislop, Miss E. B	Stratford	Mackenzie, Miss J. C	Brockville
Hislop, Miss E. E	Toronto	McKenzie, L. M	Guelph
Hodgins, Miss M. I	London	MacKenzie, R. V.	Chailottetown, P. E. I.
Hornal, J.	Muirkirk	MacKercher, Miss A. H	Wroxeter
Howard, J. W	Malton	McLaren, Miss H. A. F	Perth
Hulet, Miss M. L	Norwich	McMullen, A. W	Toronto
Hunter, Miss E. M	Peterborough	McNaught, D. M	Toronto
Irwin, Miss I. F	Toronto	MacNaughton, R. M	Peterborough
Isbister, A. A	Toronto		
Jackson, O.	Mossley		

Name	Home Address	Name	Home Address
McNeely, J. T.	Norwood	Schmidt, Miss E. M.	Tavistock
McNichol, Miss D. E.	Toronto	Scott, W. R. M.	Toronto
Macpherson, Miss E. T.	Toronto	Secord, Miss M. L.	Toronto
McTaggart, A. N.	Harriston	Sharpe, G. V.	Toronto
Manson, Miss K. R.	Toronto	Shoemaker, C. A.	Ottawa
Mathers, Miss A. S.	Toronto	Sinclair, Miss J. H.	Toronto
Matthew, Miss D. A.	Georgetown	Singleton, Miss M. E. V.	Toronto
Maurice, R.	Sturgeon Falls	Sissons, Miss M. H.	Toronto
Messina, S.	Toronto	Skelton, Miss J. E.	Mimico Beach
Miller, E. A.	Rodney	Smith, C. C.	St. Thomas
Monkman, Miss O.	Cooksville	Smith, Miss J. B.	London
Moon, A. M.	Warton	Smith, M. D.	Unionville
Moreland, P. A.	Sunbury	Spence, W. F.	Tillsonburg
Mulvihill, Miss J. E.	Arnprior	Spence, Miss M.	Toronto
Mundy, Miss L. E.	Toronto	Steadman, A. C.	Alvinston
Murphy, Miss E. A.	Peterborough	Stewart, Miss N. H.	Toronto
Nelson, Miss H. M.	Smiths Falls	Stewart, W. J. A.	Halifax, N.S.
O'Brien, Miss M. J.	Franklin	Stock, L. J.	Mimico Beach
O'Brien, A. D.	Toronto	Stone, Miss G. A.	St. Marys
O'Brien, D. C.	Merrickville	Stowell, Miss I. E.	Hamilton
O'Neill, Miss A. M.	Clandeboyne	Summerby, Miss M. G.	Massey
Orser, Miss D. H.	Elginburg	Tacon, P. H.	Windsor
Orser, Miss G. C.	Elginburg	Tanner, W. W.	Windsor
Pakenham, F. R.	Norwood	Taylor, Miss G. M. P.	Toronto
Patterson, Miss E. F.	Niagara Falls	Taylor, J. D.	Hamilton
Pearson, Miss D. M.	Weston	Tolton, B. E.	Guelph
Phillips, J. F.	Toronto	Toole, W. B.	Toronto
Philp, C. R.	Colborne	Trayes, A. R.	Williamstown
Philp, L. A.	Lindsay	Tuer, J. E.	St. Marys
Philp, R. W.	Arthur	Turner, Miss J. F.	Nelson, B. C.
Pickett, Miss M. M.	Hamilton	Vahey, T. J.	Toronto
Pineau, Miss A. C.	Windsor	Valentine, C. F.	Waterloo
Plewes, Miss D. W.	London	Vaughan, W. S.	Niagara-on-the-Lake
Plunkett, Miss M. B.	Havelock	Wainwright, P. H.	Toronto
Potter, Miss L. R.	Beamsville	Walters, W. E.	Owen Sound
Powley, Miss D. H.	Toronto	Walton, Miss W. G.	Parry Sound
Pugsley, Miss H. R.	Toronto	Watson, E. J.	Plantagenet
Purvis, W. F.	Toronto	Watson, H. W.	Rockwood
Pyne, Miss W. M.	Toronto	Watson, Miss M. A.	Madoc
Quirie, Miss V. J.	Weston	Welsh, R. S.	Toronto
Ramsay, Miss E. M.	Toronto	Weedmark, I. H.	Beachburg
Reddick, Miss M. J.	Toronto	West, Miss G. A.	Toronto
Reynolds, T. J.	Madawaska	White, Miss M. A.	Lindsay
Richards, Miss L. J.	Toronto	White, O. H. J.	Stratford
Riddell, Miss H. G.	St. Catharines	Wiggins, Miss G. E.	Kemptville
Riddell, Miss L. W.	Portage la Prairie, Man.	Wilensky, Miss D.	Toronto
Rivers, F. S.	Lucknow	Willis, Miss A. I.	Lyndhurst
Roach, Miss M. G.	Arthur	Wilson, Miss E. L.	Clarence
Robbins, Miss H. E.	Walkerville	Wingfield, Miss M. M.	Hamilton
Roberts, W. F.	Woodstock	Wood, Miss C.	Toronto
Robertson, Miss H. C.	Treherne, Man.	Wood, J. J.	Ottawa
Robertson, Miss J. A. K.	Perth	Worthington, Miss E. M.	Toronto
Runnings, Miss J. M. V.	Toronto	Wright, Miss M. M.	Richmond Hill
Sadowski, Miss E.	Toronto	Young, H. E.	Deseronto
Schell, Miss E. M.	Stayner	Young, Miss J. I.	Chesley
Schell, Miss G.	Stayner	Young, Miss R. I.	Trenton



## STUDENTS REGISTERED FOR SPECIALIST CERTIFICATES ONLY

Name	Home Address	Name	Home Address
Anderson, F. H	Minto, Man.	Hall, Miss M M S	Kingston
Butt, S	Detroit, Mich.	Harvey, Miss M. I	Toronto
Carr-Harris, Mrs M	London	Jones, W. C	Toronto
Cunimiford, L	Aurora	Laughlin, Miss H. J	Caledon
Durie, Miss H. F.	Toronto	Marwick, B. D	Dresden
Fraser, Miss C. M	Kenmore, Ont.	McCamus, L. D	London
Gardner, Miss G ...	Toronto	McLaren, Miss H. A F	Perth
Gray, Mrs. E D	Gravenhurst	Wheadon, Miss M.	Toronto

## STUDENTS REGISTERED FOR ORDINARY CERTIFICATES IN HOUSEHOLD SCIENCE

Borland, Miss P	Indian River	Limpert, Miss A. L	Hespeler
Bowen, Miss B	Orangeville	MacLeod, Miss B. C	Edmonton, Alta.
Conover, Miss E G	Toronto	Oliver, Mrs. M. L	Niagara Falls
Devitt, Miss V	Toronto	Roberts, Miss E. W	London
Dougherty, Miss E F	Goderich	Stearman, Miss W. A.	Vancouver, B.C.
Edwards, Miss F. V	Manilla	Traver, Miss E. A	Strathroy
Ferguson, Miss H. M	Hamilton	Wilson, Miss M. I. S ..	Toronto
Hanke, Miss T A	Tavistock		
Henry, Miss A	London		

## STUDENTS REGISTERED FOR THE BACHELOR OF PEDAGOGY DEGREE

Acres, Mrs. M. A	Ottawa	Fallis, W R	Toronto
Adams, J. G	Oshawa	Ferguson, W. P	Toronto
Allan, P. C	Toronto	Fitch, J. H	Truro, N.S.
Anderson, G. R	Moose Jaw, Sask.	Fitzpatrick, A	Toronto
Arnold, D. O	Windsor	Floyd, A E	Winnipeg, Man.
Ashall, Miss F. M	Toronto	Foley, R. S	Toronto
Baker, J. W.	Toronto	Fraser, S. L	Montreal, Que.
Ballard, M. R.	Moose Jaw, Sask	Fydel, W. A	Toronto
Bartlett, F. L	Toronto	Galpin, H B	London
Bennett, W. G	Toronto	Green, W. H. H	Sudbury
Bibby, Miss M. V	Toronto	Groh, I	Preston
Bowers, H.	Exeter	Grusz, F C	Brandon, Man
Bramfitt, G. N	Toronto	Halliday, Miss F. F	Toronto
Brink, J. E	Westborough	Halnan, L. R	Stratford
Bunt, W. H	Toronto	Hardy, J. H	Perth
Cameron, J. A.	Toronto	Henry, L. J	Toronto
Carlton, W H	Toronto	Henry, S. E	Haileybury
Carruthers, O. K.	Toronto	Holmes, A	Toronto
Cavell, E. E	Toronto	Hume, A G	Toronto
Cavell, H. E	Toronto	Jamieson, E	Toronto
Charbonneau, L	Ottawa	Jamieson, H W	Niagara Falls
Clarke, S. H	Toronto	Jamieson, Miss J. L.	Toronto
Coles, H. F	Richmond Hill	Jenkins, J. T.	Toronto
Davidson, D M	Toronto	Jones, W. C	Toronto
Davidson, J. H.	Hamilton	Judson, W	Toronto
Davidson, R. J	Regina, Sask.	Keene, J	Galt
Day, G. S	Toronto	Kennedy, G. N	Toronto
Denny, J. D	Regina, Sask.	Kern, D. S	Toronto
Douglas, A. C	Hawkesbury	Kirk, W. F	Toronto
Downey, R. F	Peterborough	Laird, A. M	Norval
Dunlop, W. J	Toronto	Leitch, A. G	Toronto

Name	Home Address	Name	Home Address
Lewis, A. C.	Toronto	O'Reilly, J. B.	Toronto
Lougheed, W. J.	Toronto	Payne, Miss L. J.	Toronto
McCamus, L. D.	London	Pearson, A.	Weston
McCool, B. S.	Mimico	Phillips, E. E.	Toronto
McCullough, J. L.	Toronto	Pound, G. S.	Abernethy, Sask.
MacInnes, E. D.	Toronto	Pyke, E. W.	Toronto
MacKenzie, D. H.	Toronto	Ray, V. A.	Toronto
McKechnie, D. G.	Regina, Sask.	Rivers, F. S.	Toronto
McKeracher, L. G.	Toronto	Scott, A. R.	Bowmanville
McKinlay, A. S.	Toronto	Scott, F. M.	Toronto
McKone, E. H.	London	Smith, Mrs. J. F.	Ottawa
McMillan, E. R.	New Westminster, B.C.	Smith, W. C.	Belleville
McQueen, J.	Toronto	Spencer, L. A.	Port Arthur
McWhorter, T. A.	Toronto	Stanbury, Miss F. M.	Toronto
Magee, H. E.	Toronto	Steele, M. E.	Markham
Manzer, R. H.	Anyox, B.C.	Steinberg, A. G.	Cornwall
Masterton, R. B.	Kamloops, B.C.	Tacon, P. H.	Windsor
Matheson, B. M.	Halifax, N.S.	Tamblyn, W. J.	Toronto
Maxner, M. O.	Lunenburg, N.S.	Taylor, W. E.	Toronto
Maxwell, W. K.	Winnipeg, Man.	Temple, J. B.	Toronto
Michell, D. S.	Winnipeg, Man.	Thomas, E. H.	Toronto
Mitchell, J. H.	Toronto	Trench, W. W. A.	Richmond Hill
Mole, W. H.	New Toronto	Verghese, T. P.	Toronto
Montgomery, J. E.	Toronto	Walsh, J. C.	Ottawa
Morgan, Miss G.	North Bay	Williams, W. H.	Toronto
Murray, J. L.	Napanee	Willis, C. B.	Edmonton, Alta.
Mustard, J. T.	Toronto	Willoughby, E. R. F.	Winnipeg, Man.
Ogle, W.	Port Hope	Wingfield, A. H.	Hamilton

## SUMMARY

Students Registered for Ordinary High School and Specialists' Certificates	321
Extra-mural Students Registered for Specialists' Certificates	16
Students Registered for Ordinary Household Science Certificates	16
Students Registered for Bachelor of Pedagogy Degree	118
	<hr/> 471

## FACULTY OF FORESTRY

## FIRST YEAR

Name	Home Address	Name	Home Address
Adamson, M. A. ....	Humberside	Parker, D. McK. ....	Humberside
Goodall, R. F. ....	York Mills	Raeburn, J. ....	Windsor
Johnson, J. W. ....	Manchester, Eng	Robinson, J. M. ....	Barrie
Kelly, T. W. ....	Islington	Scheult, L. R. ....	Trinidad, B.W.I.
McCraw, W. E. ....	Toronto	Teasdale, J. A. ....	Massey
McLaren, D. ....	Toronto	Usher, W. D. ....	Hawick, Scotland
MacNamara, J. W. ....	Toronto		

## SECOND YEAR

Connor, L. L. ....	Ottawa	Smith, R. E. ....	Toronto
Gimby, W. E. ....	Sault Ste. Marie	Steele, W. E. ....	Almonte
McCausland, H. L. ....	Michigan, U.S.A.	Ussher, R. D. ....	Toronto
Putnam, M. M. ....	Merrickville	Ward, E. L. ....	Toronto

## THIRD YEAR

Goodfellow, A. W. ....	Huntingdon, Que	Macdonald, S. C. ....	Toronto
Halliday, W. E. D. ....	New York City	Mackey, T. E. ....	Thornbury
Heaven, H. C. G. ....	Hamilton	O'Connor, P. A. ....	Trinidad, B.W.I.
Krug, H. H. ....	Chesley	Phipps, G. W. ....	Thornbury
Lane, G. R. ....	Guelph	Ryan, T. H. ....	Victoria, B.C.

## FOURTH YEAR

Archer, C. F. ....	Kaslo, B.C.	Higgins, W. A. ....	Toronto
Batt, C. A. ....	Toronto	Kingston, G. A. ....	Ottawa
Bedell, G. H. ....	Bowmanville	Parsons, H. H. ....	Toronto
Burrows, T. A. ....	Winnipeg, Man.	Rowe, C. A. ....	Toronto
Fenwick, A. R. ....	Toronto	Thomson, G. J. ....	Mansfield
Greenwood, W. B. ....	Toronto	Willson, W. E. ....	Aurora

## SUMMARY

First Year ..	13
Second Year ..	8
Third Year ..	10
Fourth Year ..	12
Total ..	43

## FACULTY OF MUSIC

## FIRST YEAR

Name	Home Address	Name	Home Address
Breakwell, Miss G. B	Vancouver, B. C.	Porter, Miss H. P	Edmonton, Alta.
Bull, Miss E. W	Toronto	Poyntz, Miss L. A	Toronto
Bulke, Miss R. M	Toronto	Prager, Miss L	Toronto
Chinn, Miss C. A	Toronto	Pratt, Miss D	Toronto
Davis, Miss A	Pembroke	Pullan, Miss J	Toronto
Duft, R	Toronto	Rodgers, C. J	Toronto
Duffus, Miss C. M	Vancouver, B. C.	Rubin, Miss A. R	Toronto
Fricker, H. C	Toronto	Smith, Miss E. M	Toronto
Hayton, Miss A. B	Vancouver, B. C.	Soderman, Miss T. C	Red Deer, Alta.
Kenney, Miss M. H	Toronto	Solway, M	Toronto
Kerslake, C. V	Toronto	Somers, G. R	Toronto
Lambert, Miss C. L.	Toronto	Stewart, Miss E. S.	Toronto
	Niagara Falls, N. Y.	Sutton, F	Outlook, Sask
MacGregor, Miss J	Toronto	Walmsley, Miss M. H.	Toronto
McHugh, M. J	Toronto	Weir, Miss N. P	Toronto
Muir, M	St. Mary's, Ont	White, Miss M. J	Parry Sound
Nixon, T. H	London	Wood, Miss M. S	Toronto

## SECOND YEAR

Bergin, Miss G. L.	East Providence, R. I.	Lewis, Miss C. Y	London
Bone, Miss E. E	Toronto	Marshall, Miss M. H	Guelph
Cairnie, Miss A	Westmount, Que.	Merchant, Miss M. J	Whitby
Caistor, Miss F. M.	Tavistock	Orr, Miss M. M	Calgary, Alta.
Dickinson, Miss R. W. J	Port Hope	Quinlan, Miss F. M	Toronto
Fenwick, G. R.	Hamilton	Record, H. J	Regina, Sask
Goodwin, F. E	Toronto	Unsworth, N. R	Toronto
James, Miss R. H. B	Newcastle	Willis, Miss N. E	Vancouver, B. C.
Lee, Miss E. M	Toronto	Worden, Miss H. C	Cranbrook, B. C.

## THIRD YEAR

Ahrens, Miss C. B	Stratford	Hawke, H. W.	Toronto
Angus, R. A	Toronto	Hunt, Miss D. B	Toronto
Bird, Miss A. C	Toronto	Irwin, Miss K. P	Toronto
Chisholm, Miss R. E	Oakville	Stephens, F. W.	Toronto
Curtis, Miss A	Bronte	White, E. F	Toronto
Egan, Miss M. E	Toronto		

## CANDIDATE FOR THE DEGREE OF MUS. DOC.

Horwood, F. J.                      Camborne

## SUMMARY

Bachelor of Music	
First Year	33
Second Year	18
Third Year	11
Candidate for Mus. Doc. Degree	1

## SCHOOL OF GRADUATE STUDIES

## CANDIDATES FOR PH.D.

Name	Home Address	Name	Home Address
Ainslie, D. S.	St. Marys	Kerr, W. B.	Seaforth
Allin, Mrs. K. D.	Toronto	Kerr-Lawson, D. E.	Toronto
Barnes, C.	Leeds, Eng.	King, E. J.	Toronto
Bates, H. C.	Easton, Pa.	Lacey, A.	Toronto
Bolton, L. L.	Vancouver, B.C.	Langford, G. B.	Calgary, Alta.
Brady, A.	Toronto	Lobb, Miss A.	Toronto
Cameron, H. M.	Toronto	MacDonald, Miss E. M.	Toronto
Carmichael, Miss M. F.	Toronto	McDougall, Miss A. P.	
Cheng, H. Y.	Washington, D.C.		New Westminster, B.C.
Clark, C. N.	Vancouver, B.C.	MacKay, L. A.	Hensall
Corey, A. B.	Wolfville, N.S.	MacKay, H. H.	Goderich
Dauphinee, J. A.		McLay, A. B.	Toronto
	New Westminster, B.C.	Maitland, Miss M.	Elora
Dobson, W. P.	Toronto	Markowitz, J.	Toronto
Dorland, A. G.	London	Moss, E. H.	Edmonton, Alta.
Dunbar, Miss V. E.	Vancouver, B.C.	Mossman, D. D.	Montreal, Que.
Dunlop, H. A.	Vancouver, B.C.	Mulligan, M. J.	Windsor
Dunlop, W. S.	Chatsworth	Murray, Miss J. E.	Saskatoon, Sask.
Eadie, G. S.	Toronto	Nicholson, J. A.	Valleyfield, P.E.I.
Eagles, B. A.	New Westminster, B.C.	Prosser, R. A.	Bridgetown, N.S.
Eastcott, Miss E. V.	Millbrook	Rebbeck, J. W.	Vancouver, B.C.
Fisher, Miss H. E.	Toronto	Reed, Miss E. R. L.	Adelaide, Australia
Fritz, Miss M. A.	Toronto	Rickaby, H. C.	Orono
Garrard, J. D.	Kirmington, England	Rotenberg, Mrs. M.	Toronto
Gee, A. H.	Toronto	Sage, W. N.	Vancouver, B.C.
Gordon, A. R.	Toronto	Scott, D. A.	Toronto
Grant, Miss M. E.	Wolfville, N.S.	Shaffer, B.	Toronto
Griffen, A. K.	Halifax, N.S.	Sine, F. L.	Sydenham
Harkness, W. J. K.	Vineland Station	Smith, H. G.	Toronto
Hill, E. A.	Norwood, Man.	Sweitzer, C. W.	Kitchener
Ireton, H. J. C.	Perth	Walker, A. R.	Toronto
Jephcott, C. M.	Toronto	Wallace, P. A. W.	Toronto
Jones, I. W.	Edmonton, Alta.	Walsh, Miss D. H.	Vancouver, B.C.
Kelly, S. F.	Toronto	Winnett, F. V.	Oil Springs
Kemp, H. R.	Toronto	Wookey, Miss G. I.	Toronto
		Wynne, A. M.	Toronto

## CANDIDATES FOR M.A.

Allen, Miss M.	Liverpool, Eng.	Bond, L. B.	Aurora
Ansley, J. W.	Toronto	Bonham, L. J.	Dutton
Archibald, Miss M. C.	Irricana, Alta.	Bowie, D. J.	Toronto
Ball, W. V.	Kingston	Brown, G. G.	Toronto
Ballard, Miss A. B.	Toronto	Brown, W. E.	Toronto
Barbour, A. D.	Toronto	Buffam, Miss M. C. W.	Perth
Barry, Miss M. D.	Toronto	Burwash, Miss F. M.	Arnprior
Bell, R. L.	Ingersoll	Carruthers, R. G.	Seagrave
Bird, Miss G. R.	Barrie	Chaikoff, I. L.	Toronto
Blakeley, A. W.	Toronto	Chamberlain, G. C.	Ottawa

Name	Home Address	Name	Home Address
Clare, N. D	Neepawa, Man.	Little, W. J	Barrie
Cohen, Miss C	Toronto	McAlpine, K. L	Tillsonburg
Colclough, B P	Toronto	McCamus, W. R	Walkerton
Conn, K. B	Toronto	McCullough, Miss J. J	Harriston
Cooley, R. F B	Hamilton	McCullough, W. S	Toronto
Couch, J. H	Strathroy	Macdonald, Miss A H G	Toronto
Cowie, Miss H	Toronto	McGeachy, Miss M. A	Sarnia
Crow, Miss E. L.	Chatham	McLaughlin, R R	Toronto
Cryer, J	Toronto	McLaurin, A. C	Toronto
Darker, G. D	Toronto	MacLaurin, Miss L. M	Vankleek Hill
Davidson, Miss J. G. T.	Lumsden, Sask.	Martland, Miss J. A. B	Toronto
Davidson, Miss V. M	Toronto	Maguire, Miss L. E	Edmonton, Alta.
Depew, Miss M. E	Paris	Mallon, J. P	Toronto
Djang, W. B	Shangtung, China	Marsh, H. H	Toronto
Donna, G	Ayton	Martyn, M. L	Ripley
Dore, J. W	Toronto	Matenko, P	Toronto
Dougall, Miss M. F	Oakville	Menzies, A. E. A.	Sarnia
Downey, F. P	Toronto	Morrell, C A	Hamilton
Dowson, Miss E. L.	Toronto	Morrison, Miss M. M	Halifax, N.S.
Ephron, H. S	New York, N.Y.	Morrow, D. C	Winnipeg, Man.
Ewart, Miss A. A	Toronto	Murphy, Miss F. M. A	Toronto
Fitch, Miss M. A	Toronto	Murray, Miss L. H	Saskatoon, Sask.
Franks, W. R	Toronto	Mustard, T	Toronto
Geddes, W. F.	Winnipeg, Man.	Niven, C. D	Old Aberdeen, Scotland
Gibson, Miss F. E. P	Oakville	Oke, C. C	Toronto
Gilmore, L. E	Toronto	Ozburn, R. H	Guelph
Gold, Miss S. M	Toronto	Partridge, J. A	Toronto
Goulding, A. M	Toronto	Perold, J. G	Toronto
Grant, W. J	Toronto	Peters, C. S	Travancore, India
Gravelle, Miss E	Toronto	Pickford, Miss M. A	Brighton
Greenaway, C. R	Toronto	Quire, Miss V. J	Weston
Greene, Miss F. B	Toronto	Ramsbottom, Miss M	Conn
Halliday, C. P	Toronto	Ray, Miss M. V	Woodville
Hamilton, J. M	Mt. Albert	Reid, Miss B. M	London
Hampson, Miss D	St. Catharines	Reynolds, N. W.	Toronto
Hanna, Miss M. I	Toronto	Riley, C. G	Milford Bay
Hannan, Miss A. A	Toronto	Ronan, Miss F. T	Toronto
Hastie, W. J. A	Toronto	Russell, Miss E. K	Toronto
Hilborn, H. W	Blair	Simpson, W. W	Burnaby, B. C.
Hogarth, Miss M. V	Hamilton	Sims, H. des B	Thistleton
Home, Miss M	Toronto	Small, C. W	Moreton's Harbour, Nfld.
Hornal, J	Muirkirk	Smith, W. E. L	Toronto
Hugill, H. R.	Toronto	Sparling, E. M.	Goring
Hussey, L.	Clarke's Beach, Nfld.	Spector, M	Toronto
Hwang, L. T	Toronto	Stone, A. R	Highgate
Irwin, Miss I. F	Toronto	Storey, W. J	Toronto
Izzard, Miss E	Woodstock	Sumberg, S. L	Toronto
Jackson, A. B	St. Catharines	Thomas, E. H	Toronto
Jameson, A. E. C	St. Marys	Thomas, H. F. S	Toronto
Kell, J. A. C	Cookstown	Thomson, R	Dobbinson
Kennedy, V. L	Toronto	Tuer, J. E	St. Marys
Kitching, O. C. H	Woodstock	Tuffy, Miss C	Toronto
Kræger, Miss C	Toronto	Turnbull, J. R	Toronto
Lawson, Miss M. R	Chesterville	Vahey, T. J	Toronto
Lightbody, C. W	Yorkton, Sask.	Walker, R. B	Toronto

Name	Home Address	Name	Home Address
Wells, D. C	Toronto	Whiteman, Miss D. F. L	Calgary, Alta.
Welty, E. J	Toronto		
West, J. B	London	Wilhelm, J. O.	Saskatoon, Sask.
Westgate, R. I. W.	Winnipeg, Man.	Wilkinson, C. R. H	Toronto
Wheeler, A. L.	Victoria, B. C.	Wilkinson, J. E	Toronto

## GRADUATE STUDENTS

Allan, P. C	Toronto	McAndrew, W. J.	Toronto
Archibald, R. G.	Hazelridge, Man.	McDonald, Miss E.	Toronto
Ashworth, C. G.	Toronto	McFadden, A. P.	Sault Ste. Marie
Bell, J. A. M.	Humberstone	M'Gonigle, Miss E. M.	Newmarket
Campbell, Miss M. R.	Hamilton	Mackenzie, J.	Toronto
Chisholm, Miss R. S.		Mackintosh, Miss H.	Madoc
	Melbourne, Australia	Maclaren, A.	Georgetown
Coughlin, H. P.	Toronto	Mathers, S. J.	Palmerston
Currie, C. M.	Smith's Falls	Matheson, Miss N. E.	Winnipeg, Man.
Daly, Miss F. D.	London	Metzler, Miss G. E.	Napanee
Davidson, Miss S. M.	Lumsden, Sask.	Mix, I. W.	Ottawa
Doig, W. P.	Wroxeter	O'Brian, Miss M. J.	Franklin
Dolan, L. J.	Toronto	Petrie, P. A.	Toronto
Doyle, Miss S.	Toronto	Phillips, J. F.	Toronto
Feasby, W. J.	Toronto	Pilcher, C. V.	Toronto
Freedman, J.	Toronto	Riddell, Miss H. G.	St Catharines
Gardiner, Miss A. C. E.	Mt. Forest	Rowe, C. L.	Toronto
Gillard, Miss A. E.	Toronto	Sheppard, N. E.	Toronto
Grant, Miss F. H.	Toronto	Smith, F. A.	Cataragui
Hanna, Miss L.	Toronto	Stantal, Miss H.	Melrose, Mass.
Hastings, Miss F. deL.	Bath, Eng.	Stevenson, Miss F. A.	New Town, Tasmania
Hern, G. E.	Dunnville		
Huband, A. R.	Ottawa	Sullivan, B.	Toronto
Hunter, Miss L. M.	Bradford	Taylor, Miss G. M. P.	Toronto
Irvine, Miss E. A.	Toronto	Taylor, Miss N. C.	Toronto
Kilpatrick, Miss E. M. R.	Toronto	Thompson, Miss D. A.	Toronto
Lai, L.	Hunan, China	Weir, Miss M. A.	Toronto
Lowe, Miss E. M.	Halifax, N.S.	West, Miss G. A.	Toronto

## CANDIDATES FOR M.D.

Colwell, H. H.	Jobat, Central India	Wilson, M. J.	Toronto
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## CANDIDATES FOR CH.M.

Dafoe, W. A.	Madoc
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## CANDIDATES FOR M.A.Sc.

Bayley, C. H.	Bridgetown, Barbados	Haughton, M. A.	Bristol, Eng.
Beattie, J.	Galt	McVicker, P.	Toronto
Chambers, H. J. A.	Toronto	Russell, N. E.	Dhar, Central India
Chute, G. M.	Toronto	Willard, M. V.	Toronto
Godefroy, C.	The Hague, Holland	Wilson, F. E.	Toronto

## CANDIDATES FOR M. ARCH.

Brown, F. B.	Toronto	Helme, J. B.	Smith's Falls
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CANDIDATES FOR C. E.			
Name	Home Address	Name	Home Address
Curzon, J. H.	Toronto	Wood, G. H.	Niagara Falls
Somers, N. L.	Toronto		

CANDIDATES FOR E. E.		
D'Alton, F. K.	..	Toronto

CANDIDATES FOR CHEM. E.			
DeLaporte, A. V.	Toronto	Musgrave, J. E. T.	Belleville

CANDIDATES FOR D. PAED.			
Allan, P. C.	Toronto	McFadden, R. W. E.	Brantford
Althouse, J. G.	Toronto	McGill, G. W.	Toronto
Ansley, J. W.	Toronto	McKechnie, J. G.	Regina, Sask.
Bannister, J. A.	North Bay	McLellan, J. C.	Toronto
Bramfitt, G. N.	Toronto	McLellan, R. F.	Toronto
Biennand, C. G.	Toronto	Macpherson, F. F.	Hamilton
Campbell, A. L.	Weston	Martyn, H. G.	Stratford
Charles, F.	Toronto	Menzies, L. P.	Strathroy
Clarke, T. E.	London	Mills, J. S.	Saskatoon, Sask.
Evans, G. E.	Smith's Falls	Misener, G. D.	Edmonton, Alta.
Ferguson, J. G.	Wolseley, Sask.	Munro, P. F.	Toronto
Goldstick, I.	London	Mustard, T.	Toronto
Grainger, H. A.	Toronto	Patterson, A. M.	Toronto
Green, W. H. H.	Sudbury	Payne, Miss L. J.	Toronto
Greer, V. K.	London	Petrie, P. A.	Toronto
Halbert, E. J.	Toronto	Phillips, C. E.	Toronto
Hoffer, G. W.	London	Prueter, H. J.	Toronto
Holmes, S. D.	Oshawa	Ray, V. A.	Toronto
Horwood, R. B.	Toronto	Ronan, Miss F. T.	Toronto
Jamieson, E.	Toronto	Simpson, J. G.	Toronto
Jamieson, Miss J. L.	Toronto	Stanbury, Miss F. M.	Toronto
Jennings, W. A.	Toronto	Stevenson, W. E.	Balcarres, Sask.
Jordan, A. A.	Toronto	Stewart, R.	Toronto
Kay, E. W.	Hamilton	Tuck, J. R.	Camrose, Alta.
Kelly, W. F.	Toronto	VanEvery, J. F.	Toronto
Kerfoot, H. W.	Ottawa	White, L.	Toronto
King, H. B.	Kitsilano, B.C.	Wilkinson, J. E.	Toronto
Long, J. A.	Toronto	Worden, O. O.	Toronto
Lougheed, W. J.	Toronto		

CANDIDATES FOR F. E.		
Wright, W. G.	..	Roberval, Que.



## DEPARTMENT OF SOCIAL SERVICE

## FULL TIME STUDENTS

## FIRST YEAR

Name	Home Address	Name	Home Address
Bach, Miss F. M.	Toronto	Hobden, Miss D. M.	Toronto
Blackmore, Miss P. F.	Toronto	Hollett, Miss B. G.	Toronto
Bronstein, N. W.	Toronto	Hyman, Miss L.	Toronto
Davidson, Miss G.	Toronto	Kingston, Miss L. R.	Ottawa
Farmer, Miss E. H.	Toronto	McLean, Miss E. D.	Toronto
Gemmell, Miss B.	Ayr	Martin, Miss V. K. C.	Hamilton
Gladstone, Miss L. M.	Toronto	Murray, Miss J. D.	Toronto
Goldberg, Miss H.	Toronto	Narrol, Miss P.	Toronto
Gorrie, Miss L. J. K.	Toronto	Ogden, Miss H. R.	Toronto
Haliburton, Miss F. G.	Toronto	Orloff, Miss E. L.	Toronto
Harris, Miss L. M.	Welland	Owen, Miss G. D.	Hamilton
Higgins, Miss N. R.	Toronto	Patterson, Miss M. I.	Toronto
Hill, Miss A. G. E.	London		

## SECOND YEAR

Campbell-Johnston, D. G.	Toronto	King, Miss V. F.	Toronto
Charleson, Miss A. L.	Ottawa	Malkin, Miss E.	Toronto
Collier, Miss A. G.	Toronto	Milligan, Miss D.	Toronto
Farwell, Mrs. E. M.	Fogo, Nfld.	Paterson, Miss R. M.	Kingston
Hastings, Miss A. A.	Toronto	Pearce, Miss H. L.	Toronto
Hesse, B. W.	Stouffville	Phillips, Miss M. M.	Toronto
Hughes, Miss K. A.	Lansing	Sinclair, Miss R. M.	Belleville
Inglis, Miss M. H.	Toronto	Williams, M. E.	Toronto

## PART TIME STUDENTS

Adair, Miss J. G.	Shawinigan Falls, Que.	Fullerton, Miss E. J.	Pugwash, N.S.
Allen, Miss F. P.	Mountain	Gardiner, A.	Ottawa
Bowes, Mrs. M. E.	Toronto	†Geldart J. H.	Toronto
Brownlie, J. M.	Toronto	Goldie, Miss M. E.	London
Burgess, Miss H. J.	Hahfax, N.S.	Halliday, Miss M. M.	Toronto
Byers, Miss L. M.	Cardinal	Handley, Miss V.	Winnipeg, Man.
Carroll, Miss M., Montreal W., Que.		Hart, Miss E.	Uxbridge
Clark, Miss E. M.	Teeswater	Hogge, Miss R. M.	Toronto
Cousland, Miss J. E.	Toronto	Holmes, Miss H. E.	Toronto
Crowther, Miss K. L.	Toronto	Jackson, Miss A.	Edmonton, Alta.
Drayson, Miss W. L.	Toronto	Jones, Miss I. C.	Glencairn
Falick, Miss S.	Toronto	Kidd, Miss F. L.	Lisle
Farthing, A. E.	Toronto	Langan, Miss R. M.	Melbourne, Que.
Flook, C. A.	Chatham	Lea, Miss F. F.	West Hill
Foerstel, Miss M.	Toronto	Levy, Miss L.	Toronto
Fremes, Miss B.	Toronto	Lubelsky, Miss M.	Toronto
†Easter Term			

Name	Home Address	Name	Home Address
McCallum, Miss M. . . . .	Toronto	Ripley, Miss A. . . . .	Kipling, Sask.
McCullough, Miss E. . . . .	Lefroy	Shaw, Miss F. E. . . . .	Toronto
McDougall, Miss S. C. Debec, N.B.		Simonsky, Miss A. . . . .	Toronto
MacIennan, Miss M. K. . . . .	Toronto	Sleeth, Miss M. M. . . . .	Ottawa
Manuel, Miss D. B. . . . .	Toronto	Smith, Miss M. L. . . . .	Toronto
Mehr, Miss E. H. . . . .	Toronto	Stone, C. G. F. . . . .	St John's, Nfld.
Mollenhauer, Miss L. B. Newmarket		Walker, Miss A. I. . . . .	Lion's Head
Owens, H. T. . . . .	Seoul, Korea	Walker, Miss J. F. . . . .	Toronto
Patterson, Miss E. M. . . . .	Paris	Wandle, Miss L. A. . . . .	Toronto
Patterson, Miss G. E. . . . .	Toronto	Weinrot, I. J. . . . .	Toronto
Ramsbottom, Miss M. . . . .	Conn	Zacks, Miss C. . . . .	Kingston

## SUMMARY

Full Time Students:	
First Year . . . . .	25
Second Year . . . . .	16
Part Time Students . . . . .	54
Total . . . . .	95

## DEPARTMENT OF PUBLIC HEALTH NURSING

## FULL TIME STUDENTS

Name	Home Address	Name	Home Address
Bain, Miss G. G. . . . .	Toronto	Larkin, Miss M. . . . .	Toronto
Bencan, Miss Ida . . . . .	Jugoslavia	Lowrey, Miss T. E. . . . .	Toronto
Buss, Miss M. . . . .	Thorold	MacDonald, Miss H. . . . .	Saskatoon, Sask.
Corrigan, Miss M. . . . .	Toronto	MacDonald, Miss V. M. . . . .	Wingham
Darling, Miss A. M. . . . .	Toronto	McGinnis, Miss P. L. . . . .	Toronto
Falls, Miss M. R. . . . .	Toronto	MacIlraith, Miss K. M. . . . .	Lanark
Glazier, Miss F. H. . . . .	Hamilton	McKinnon, Miss K. . . . .	Copper Cliff
Hacks, Miss E. . . . .	Brussels, Belgium	Merritt, Miss H. B. . . . .	Waterloo
Haley, Miss H. L. . . . .	Toronto	Percy, Miss D. M. . . . .	Ottawa
Hervey, Miss R. . . . .	Maitland	Pulling, Miss H. . . . .	Sandwich
Hunter, Miss G. . . . .	Toronto	Radmore, Mrs. L. I. . . . .	Toronto
Jackson, Miss F. C. . . . .	Lindsay	Redman, Miss G. B. . . . .	Toronto
Janic, Miss M. . . . .	Jugoslavia	Reed, Miss G. . . . .	Ottawa
King, Miss E. . . . .	Toronto	Riordan, Miss A. M. . . . .	Toronto
King, Miss E. M. . . . .	Toronto	Robertson, Miss M. . . . .	Ottawa
Lambie, Miss M. I. . . . .	Christ Church, New Zealand	Sherman, Miss M. A. . . . .	Toronto
Larkin, Miss H. D. . . . .	Seaforth		

## PART TIME STUDENTS

Allison, Miss J. T.	Toronto	Price, Miss Z. I.	Toronto
Cale, Miss E. A.	Toronto	Rogers, Miss A. A.	Toronto
Carroll, Miss V. W.	Toronto	Russell, Miss E. G.	Toronto
Davies, Miss M. E.	Toronto	Sharpe, Miss E. H.	Toronto
Fenton, Miss E.	Toronto	Skitch, Miss R. B.	Toronto
Heffernan, Miss H.	Toronto	Torr, Miss A.	Toronto
Hutchison, Miss B. S.	Toronto	Wheeler, Miss M. A.	Toronto
Kilburn, Miss J. F.	Toronto	Woods, Miss J. M.	Toronto
Mowry, Miss B.	Toronto		

## SUMMARY

Full Time Students	33
Part Time Students	17
Total	50

## GRAND SUMMARY

Faculty of Arts	2,500
Faculty of Medicine	798
Faculty of Applied Science and Engineering	488
Faculty of Household Science	23
Ontario College of Education	471
Faculty of Forestry	43
Faculty of Music	63
School of Graduate Studies	336
Department of Social Service	95
Department of Public Health Nursing	50
Duplicates	65
Total	4,802

## HISTORICAL SKETCH

The movement which ended in the establishment of the University of Toronto as the centre of the educational system of the Province of Ontario originated with General Simcoe, the first Governor of Upper Canada, who repeatedly expressed his conviction, both before his departure from England and also during his term of office (1792-1796), that the best interests alike of the Government and of the inhabitants demanded the establishment of a University in Upper Canada. It was not, however, during his administration that the project assumed a definite form.

In 1797 the Legislative Council and House of Assembly in a joint address to King George III. asked "that his Majesty would be graciously pleased to direct his Government in the Province to appropriate a certain portion of the waste lands of the Crown as a fund for the establishment and support of a respectable Grammar School for each district thereof; and also a College or University for the instruction of youth in the different branches of liberal knowledge". To this address a favourable answer was transmitted, and the acting Lieutenant-Governor, the Hon. Peter Russell, was directed to determine the manner and character of the appropriation. In accordance with this request the Executive Council of Upper Canada reported on the 1st December, 1798, that an appropriation of 500,000 acres would be sufficient for the support and maintenance of four Grammar Schools and a University. For the foundation of the latter nothing was done until 1827, when a Royal Charter was granted for the establishment at or near York, as Toronto was then called, of a College, "with the style and privileges of a University", to be called "King's College", having for its endowment that portion of the grant of "waste lands" originally provided for the University in the report above referred to. These lands were in 1828 exchanged for 225,944 acres of Crown Reserves.

Owing not only to the character of the endowment, which required time for its realization in the form yielding an annual revenue, but also owing to the terms of the charter, which required all the members of the Faculty to be adherents of one particular religious denomination, the opening of the College was delayed for fourteen years. In consequence of public representations on the sectarian character of the College, all religious tests were abolished by an amended charter which passed the two Houses of the Provincial Legislature and received the Royal Assent in 1837. In 1842 the affairs of the University had assumed such a condition as to render its organization possible, and Faculties of Arts, Medicine, Law and Divinity were established. In that year the erection of the College Building was begun on the eastern portion of the site of the present Legislative Buildings. In 1843 the first matriculation of students took place, and inaugural addresses and lectures were delivered on the 8th and 9th of June of that year.

The agitation which resulted in the amended charter of 1837 had continued after the opening of the College in 1842, owing to the efforts made to defeat the purpose of the amendment, and in 1849 an Act of the Legislature effected important modifications in the constitution of King's College whereby all instruction in Divinity was discontinued, and a larger measure of public control of the affairs of the University instituted, through the formation of a Senate, of which a number of the members were appointed by the Crown. The name was now changed from that of "The University of King's College" to that of "The University of Toronto".

Three years afterwards the University underwent a further transformation, by which the Act of 1853 abolished the Faculties of Medicine and Law, and divided its functions between the two newly organized corporations of the "University of Toronto" and "University College." To the Senate were assigned the duties of framing the curriculum, holding examinations and admitting to degrees in Arts, Law and Medicine, while to the Presidents and Professors of University College, as a distinct and independent corporation with special powers, were assigned the teaching in Arts and the entire discipline and control of students. The models followed in the reorganization of the University, it claimed, were the University of London and University College, London, both of which had then been only recently established. For thirty-four years the University of Toronto and University College performed the functions respectively assigned to them by this Act.

During the early years of the University it experienced repeated changes in its local habitation. The faculty and students of King's College were at first temporarily accommodated in the Parliament Buildings until the erection of the east wing of King's College admitted of the occupation of their own building. From this they were anew transferred to the old Parliament Buildings in 1853, when, by a special Act, the site of King's College was appropriated for the proposed new buildings for the use of the Parliament of Upper and Lower Canada. On the return of the Legislature to Toronto, in 1856, the Faculty resumed the occupation of the old King's College Building, while one formerly in use by the Medical Faculty, situated on the site of the present Biological Building, was being adapted for their occupation. There accordingly the work of the College was carried on, pending the erection of the new University buildings. These buildings were begun in 1856, and on October 4th, 1859, the top stone of the main tower was placed in position by Sir Edmund Head, the Governor-General, an old Oxford professor, the value of whose sympathy and support at this critical period in the history of the University cannot be overestimated.

For thirty-four years the constitution of the University of Toronto and of University College remained unchanged. Other collegiate bodies, principally denominational schools of theology, entered into affiliation with the University, and, with regard to their especial requirements, the course of study in Oriental Languages was augmented, but the Faculty of University College continued to do the work of instruction for nearly all the students

in Arts who presented themselves for examination. The candidates for examination and degrees in medicine were trained in medical schools in affiliation with the University, and for degrees in Law the examinations were based upon text-books prescribed by the Senate, without teaching.

In 1887 both the University of Toronto and University College were remodelled by the University Act. The main object of renewed legislation was to secure a more uniform standard of higher education by the union of the various denominational universities of Ontario with the Provincial University. Since the proclamation of the Act, Victoria University at Cobourg, representing the Methodist body, has entered into federation with the University of Toronto. The governing body of this institution is now represented on the Senate of the University of Toronto, its graduates elect representatives to the same body, and by the removal of the faculty and students of Victoria University to Toronto, where college buildings have been erected to the north of Queen's Park, the union of the two universities has been effected. Under the Federation Act, the theological colleges, also formerly in affiliation with the University of Toronto, have become federated colleges, and enjoy increased representation on the Senate.

The Faculty of University College, by the Act 1887, consists of professors and lecturers in Classic Languages and Literature (including lectures in Ancient History), Oriental Languages, English, French, German and Moral Philosophy. All other portions of the Arts course are assigned to the Faculty of the University of Toronto, of which the lectures are made equally available to the students of University College, and those of all federating universities and colleges. For the maintenance of certain of the departments of science on a scale demanded by modern methods of research, special provision has been made by the erection of new and the enlargement of old buildings. In the new Biological Building every facility is now provided for practical training in Biology and Physiology. The Chemical Building was completed in 1895, and affords similar facilities for practical work in Chemistry.

A Faculty of Medicine in the University of Toronto was established immediately upon the passing of the Act in 1887, and teaching is imparted in all branches of medical science. All the advantages of the Faculty of Arts are available for students in Medicine, and the laboratories of the scientific departments are utilized equally by students in both faculties. In 1903 the new Medical Building was opened.

In 1888 a stimulus was given to the study of scientific methods of farming by the affiliation of the Ontario Agricultural College and the adoption of a curriculum of study for the degree of Bachelor of the Science of Agriculture. Similarly an examination for the degree of Doctor of Dental Surgery was instituted, as a consequence of the affiliation of the Royal College of Dental Surgeons of Ontario. The College of Pharmacy was subsequently admitted to affiliation and a curriculum in Pharmacy prescribed. On the affiliation of the Toronto College of Music a curriculum of study was prepared for the degree of Bachelor of Music. The School of

Practical Science was affiliated in 1889, and graduates of the School are specially eligible on certain conditions for the degree of Bachelor of Applied Science and of various degrees in Engineering in the University. By a recent enactment of the Senate a curriculum was prescribed leading to the degrees of Bachelor and Doctor of Pedagogy. In 1897 a course of study was established leading to the degree of Doctor of Philosophy in certain of the Arts departments. In 1897 the Ontario Veterinary College was also affiliated.

On February 14th, 1890, the Main University building was partly destroyed by fire. In the reconstruction thereby rendered necessary, opportunity was afforded for important improvements in lighting, heating and ventilation. Considerable extension was effected in the numbers, capacity and equipment of the lecture rooms and laboratories. A new library building was erected on plans embracing the most recent improvements suggested by the experience of leading universities in the United States and elsewhere. A building for the accommodation of the Gymnasium was erected in 1892 and additions to it were completed in 1894 for the accommodation of student societies.

One of the most important events of recent years was the federation of the University of Trinity College, which was proclaimed by His Honour the Lieutenant-Governor on the 18th of November, 1903, and came into effect on the 1st of October, 1904.

The passing of the University Act, 1906, is the latest and most important development in the history of the University. A short account of the changes of greatest importance will be found in the early portion of this calendar under the title "Constitution and Administration of the University".

As provided in the University Act of 1906, St. Michael's College was declared to be a College in the Faculty of Arts on the 8th of December, 1910. On November 11th, 1910, Hart House, the gift of the Massey Foundation, was formally opened by His Excellency the Duke of Devonshire, Governor-General of Canada. The building is the new Undergraduates Union of the University and contains completely equipped club rooms, including common rooms, dining hall, chapel, the offices of the various students societies, gymnasia and theatre.

## THE ROYAL ONTARIO MUSEUM

The Royal Ontario Museum was officially opened by Field Marshal His Royal Highness the Duke of Connaught, Governor-General of Canada, on the afternoon of Thursday, March 19th, 1914. This event marked a memorable occasion in the history of Art and Science in the Province of Ontario.

The Royal Ontario Museum was established under an Act of the Legislative Assembly of Ontario in the year 1912. According to the Act the purposes of the museum are:—

(a) The collection and exhibition of objects of every kind calculated to illustrate the natural history of Ontario, and thereby to aid in a knowledge of what this province is able to contribute to science and industry.

(b) The collection and exhibition of objects of any kind calculated to illustrate the natural history of the world and the history of man in all ages.

(c) Such other objects as may be authorised by the Lieutenant-Governor in Council.

The cost of the erection of the building and the maintenance thereof is borne in equal amounts by the Province of Ontario and the University of Toronto. The present building, inclusive of offices, is 360 feet long and 60 feet wide and was erected at a cost of about \$400,000. The large section of University property lying between the present building and Avenue Road has been reserved by the Board for the extension of the Museum. The proposed plans show the building in the form of a hollow square with a handsome stone front facing Bloor Street.

Under Section 20 of the Museum Act the Board is empowered to establish various departments of the Museum which are to be designated "The Royal Ontario Museum of . . . ." In accordance with this by-law the Board has already established the Royal Ontario Museums of Archaeology, Geology, Mineralogy, Palaeontology and Zoology.

The establishment of this museum conjointly by the Province of Ontario and the University of Toronto is due in very large measure to the enthusiasm and leadership of the late Sir Edmund Walker, the Chairman of the Board of Trustees.

The Museum is governed by a Board of Trustees, a body corporate consisting of ten members. The Minister of Lands, Forests and Mines and the Minister of Education of the Province of Ontario, and the Chairman of the Board of Governors of the University of Toronto are ex-officio members of this Board. The other seven members are appointed—four by the Lieutenant-Governor in Council, and three by the Governors of the University of Toronto as follows,—



*Appointed by the Lieutenant-Governor in Council :*

SIR EDMUND OSIER,  
J. B. O'BRIAN, ESQ., K.C.,  
MRS. H. D. WARREN,  
SIGMUND SAMUEL, ESQ.

*Appointed by the Governors of the University of Toronto :*

Sir Joseph Flavelle,  
The President of the University,  
Colonel R. W. Leonard.

## ARCHAEOLOGY.

The Royal Ontario Museum of Archaeology is under the direction of C. T. Currelly, and is designed to show the best work which was done in the different crafts by the people of the past. An attempt has been made to show the history of the development of each of the great arts which have made civilization possible, by exhibiting the best examples of the early stages of development, of the culminating point, and then of the decline.

For the Stone Age the collection is very large, almost world-wide. The use of the early metals (copper and bronze) in the evolution of important tools is shown by a series of examples grouped under the Last Prehistoric Collection.

A large Egyptian series and a smaller Babylonian collection exhibit the history of pottery, stone vases, weapons, jewelry, medicinal articles, tools, textiles, sculpture and objects connected with death and burial. These exhibits occupy three galleries.

Two large galleries are devoted to the exhibition of ancient works of art from Greece and Italy. These consist of vases that illustrate nearly all the stages of vase painting from the Aegean and the mainland, armour, statuettes, jewels, and sculpture.

The next gallery is devoted to a collection to illustrate the life of the common people at the time of Christ and the early Church. This ranges from rag dolls to weapons, and from combs and domestic articles to shoes and tunics. In this same gallery is a large collection mainly of pottery objects obtained from the tombs of Palestine, and extending in periods from the earliest times down to the periods of the Byzantine empire.

As the student is now brought through the great spread of civilization of the Roman period, the next exhibition is of those nations that have lagged behind, where prehistoric things may be illustrated more freely by peoples who have recently been in the Stone Age. Here are shown the weapons and implements of the Eskimos, Africans, and South Sea Islanders, and of other peoples in the Stone Age or other primitive conditions.

Parallel to this gallery runs the collection illustrating the life of the American Indian. This consists of a fine series of paintings, objects of

the Stone Age, and survivals of early things in use by the present Indians. It is mainly devoted to North America, though several cases contain Mexican, Peruvian and other South American objects

The great central hall is packed with Chinese works of art, of which we are particularly rich in tomb objects, especially terracotta sculptures and early wares. The collection of stone sculpture is also considerable, and the collection of textiles, jades, bronzes, etc., quite large. The whole forms one of the best general collections of Chinese art in existence. No space is available for the large collection of very fine Chinese paintings possessed by the Museum.

South of the central hall are two galleries devoted mainly to furniture and rooms, but with a certain number of costumes, wood-carvings, etc., put in because of lack of other space for them

The cross gallery at the end contains the Japanese collections of pottery, bronzes, armour, carvings, paintings, etc.

Between the large central hall and the door are parallel galleries, one devoted to the history of science, and filled in with musical instruments, velvets, glass, furniture, sculpture, etc., the other one devoted to lace and embroideries, but with the general collection of arms and armour also packed into it

The space immediately inside the door is devoted to the exhibition of recent acquisitions.

## MINERALOGY

In the Royal Ontario Museum of Mineralogy, which is under the direction of Professor T. L. Walker, are very extensive collections of minerals and rocks. The most generous benefactors of this section are men connected with the mining industry. To make the collections more useful to visitors the large specimens contained in the high cases are provided with special explanatory labels. In the cases on the east wall of the gallery a special display of the minerals of Canada is arranged. The Director appeals to friends of the University for contributions of minerals and rocks with a view to making these collections as complete as possible.

During the past year the collections have been increased by donations from a large number of friends, exchange, purchase and collection by the Museum Staff.

Notable presentations have been made by the International Nickel Company, T. L. Gledhill, Esq., M. D. Kennedy, Esq., The Mining Corporation of Canada, A. F. Brigham, Esq., Dr. J. M. Bell, and F. M. Thompson, Esq.

Important exchanges have been made with the British Museum (Natural History), the United States National Museum, Riksmuseet, Stockholm, Harvard University, Yale University, Massachusetts Institute of Tech-

nology, American Museum of Natural History, The Australian Museum, Museo Nacional de Ciencias Naturales (Madrid), Museum National d'Histoire Naturelle, Paris, in addition to numerous exchanges of lesser magnitude.

### GEOLOGY

The Museum of Geology is under the direction of Professor E. S. Moore, and it occupies the gallery along the west side of the basement. Its ten alcoves are designed for exhibits of the mineral resources of Canada in particular and of the features of Economic, Structural, and Dynamic Geology in general. This gallery is devoted specially to the exhibition of ores and other economic mineral products, and most of the exhibits have been received through the generosity of the men in the mining industry.

The more important collections in the gallery include the Cobalt silver ores, the ores and associated rocks of the Sudbury Nickel field, the coals, micas, clays, oils, building stones, and ores of Canada, the asbestos of Quebec, and the various economic minerals of many countries of the world. There is an unusually fine exhibit of marbles, domestic and foreign, and the exhibit of specimens illustrating glacial phenomena in various geological periods on the several continents is usually regarded as the most complete in existence.

Of the additions to the Museum during the past year the following are the more important:

Carnotite ore from Colorado, Sphalerite from Scotland, Cuprite from Arizona and New Mexico, Gold ore from California, Gem garnets from Ural Mountains, Jamesonite from England, and sandstone showing remarkable structural features from South Dakota. Purchased

Group of large paintings illustrating geological features, from Dr. A. P. Coleman

Suites of iron ores from the New Helen Mine and the Gibson Iron Syndicate claims, Michipicoten District, Ontario. Collected by the Director.

Models illustrating mining camps in northern Ontario are under preparation.

### PALAEONTOLOGY.

The Museum of Palaeontology is under the direction of Professor W. A. Parks, and occupies the middle section of the top floor of the building. The collection of fossils is very extensive and contains many rare and unique specimens. It has developed from a nucleus presented by Sir Edmund Walker some years ago. Among the more important exhibits are the type Canadian fossils presented by Sir William MacKenzie; the fossil sea-lilies presented by Mr. Frank Springer of Burlington, Iowa; a large fossil reptile presented by Sir Edmund Walker, Sir Donald Mann, Sir Lyman Melvin Jones and others; a moa from New Zealand, a mastodon from Ontario; and a number of the great dinosaurs from Alberta.

A series of wall cases has been installed, in which the geology and palaeontology of Canada is illustrated in a continuous but restricted manner.

Three nearly complete specimens of trachodont dinosaurs have been mounted in the gallery; two of these are species new to science and the third represents a known species in far greater detail than the original specimen. Two heads of another new species of trachodont have been mounted recently and, also, the head of species already known. There has also been placed on exhibition a very perfect head and part of the body of the horned dinosaur *Centrosaurus apertus*, also, the rear portion of the skeleton with skin and plates intact of a new genus of plated dinosaur. During the past year a very perfect head of a new genus of horned dinosaur has been prepared but is not yet placed in the gallery. The complete skeleton of an Irish deer and two sets of antlers have been placed on exhibition.

The department is provided with commodious storage and preparation rooms equipped with the necessary appliances for cutting and polishing specimens, and for the complex work of preparing vertebrate skeletons.

The more important acquisitions during the past year are as follows:—

The skeletons of three dinosaurs from the Edmonton formation of Alberta—University expedition of 1924

Small collection of fossils—N. K. Bigelow, J. S. Cardingley, G. A. Carefoot, Professor Carruthers, Dr. Coleman, H. W. Fleury, Dr. Frayleigh, Miss Fritz, R. J. Philp, S. Johnston

Models of Pittdown skull and jaw—Dr. H. M. Ami, Ottawa.

Dendroid graptolites from Vinemount, Ont.—The staff.

Antler of *Rangifer caribou*, Pleistocene of Toronto—Mr. Herbert Brown

Antler of *Cervus canadensis*, Pleistocene of Toronto—Mr. Geo. Smith.

Cranium of musk ox, Pleistocene of Toronto—Mr. Robert Burleigh.

Fossils from Queen Charlotte islands—Captain Thomas Smith.

Mesozoic and Tertiary fossils from California—Charles Sternberg.

Complete skeleton and two sets of antlers of *Cervus giganteus* from Ireland—Miss Pride, Toronto.

Stigmaria from Coal Measures of Illinois—Mr. Paul Weir, Zeigler, Ill.

## ZOOLOGY

The Museum of Zoology is under the direction of Professor B. A. Bensley, and occupies the north portion of the top floor of the building. The first installation of specimens took place in 1914, some time after the establishment of the remaining portions of the Royal Ontario Museum, the nucleus of the new collection having been formed chiefly from Canadian material previously housed in the Biological Museum of the University. Many new additions have been made through the generosity of individual donors and through the co-operation of the Provincial Government and the Parks Department of the City of Toronto. The exhibits illustrate especially the fauna of Canada, all groups of which are represented, though Birds,

Mammals, and Insects predominate. Some foreign material, more especially of birds, mammal heads and molluscan shells, has been installed as the beginning of a more general collection which will be developed later when more extensive accommodation becomes available

#### ADDITIONS TO COLLECTIONS.

##### ZOOLOGY.

During the year 1924-25 there were important additions to the zoological collections and to the library.

(1) The following specimens were received by donation

Specimens of osprey, sharp-shinned hawk and western phalarope from R. V. Lindsay, Toronto.

A bald eagle, mounted in case, from P. H. Mitchell and Dean C. H. Mitchell, Toronto.

Two red phalaropes and a Brewer's blackbird (Hudson's Bay) from Mrs. Munday, Toronto.

A collection of amphibia and other specimens from W. J. LeRay, Toronto

A caiman skin from W. G. Trethewey, Toronto.

Three birds from G. E. Lindblad, Toronto.

A collection of birds from Georgian Bay and other specimens from Dr. Paul Harrington, Toronto.

One hundred and eighty birds of the Sudan from H. S. Osler, Toronto.

A passenger pigeon from Paul Hahn, Toronto.

Specimens of fish jaws and insects from Brig. Gen. G. H. Ralston, Port Hope

A mountain beaver, mounted, from Kenneth Racey, Vancouver, B.C.

(2) Photographs and reproductions of animal pictures were received from J. H. Fleming, W. J. LeRay, Dr. Paul Harrington and R. V. Lindsay.

(3) The library received a large number of pamphlets bearing on animal classification. The "History of Quadrupeds", 2 vols., 1793, was presented by Dr. Harrington.

(4) A number of collections were purchased at a nominal valuation, including:

A collection of bird skins from J. A. Munro, Oak Bay, B.C.

A collection of mammal skins from W. J. LeRay, Toronto.

A collection of bird skins, property of the late J. L. Jackson, Toronto

A collection of mammal skins from A. A. Wood, Coldstream, Ont.

(5) Members of the scientific and technical staffs made field collections during the summer of 1924, including a series of 265 bird and mammal skins from Lake Nipigon region and many specimens of fishes, amphibia, and reptila from this and other regions. A special collection of insects was made by N. K. Bigelow in Iowa

## DONATIONS OF BOOKS

Since the destruction of the University Library by fire in 1890, upwards of 56,500 volumes have been presented by various persons and organizations. For a complete list of the latter, see Appendices to Calendars since 1893. The following is a list of donors for the year ending December 31st, 1924.

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Errera, Mme. Leo  
Ewing, A. E., St. Louis, Mo.  
Falconbridge, J. D., Toronto.  
Falconer, Sir Robert, Toronto.  
Fay, Professor C. R., Toronto.  
Fergus, Robert.  
Ferne, Chas., Cambridge University.  
Geddes, J., Boston University.  
Geddes, Professor, Patiala, India  
Gollancz, Sir Israel  
Gray, Dr. R. B., Bay Shore, New York.  
Hall, Dr., Vancouver.  
Hardy, E. A., Toronto.  
Harvey, W. G., American Magnesium Corporation.  
Haves, Lionel, University of British Columbia.  
Higgins, Mrs., St. Louis  
Hirschfield, David, New York.  
Hopkins, Castell, Toronto.  
Horn, David, Detroit.  
Howe, Professor C. D., Toronto  
Jackson, Professor Gilbert, Toronto.  
Janet, Charles, France.  
Kemp, H. R., Toronto.  
Kennedy, Professor W. P. M., Toronto.  
Learmont, Mrs., Montreal.  
Lecat, Maurice, Louvain.  
Lighthall, W. D., Montreal.  
Lillebridge, R. D., New York.  
Lloyd, F. E., McGill University.  
Matthews, Edward Bennett, Johns Hopkins University.  
McCall, T. S., Wood River, Illinois  
McLeod, J. A., Bank of Nova Scotia.  
McMurtrie, D. C., Conde Nast Press.  
Mercer, Professor, Trinity College

- Miles, Mrs. Arthur, Toronto  
Miller, W. G., Provincial Geologist, Toronto.  
Mills, W. H., California.  
Morrow, E. Lloyd  
Nixon, Dr, Bristol.  
Pillsbury, A. E.  
Poulton, Edward B., Oxford.  
Randolph, Corliss F, Newark, N.J  
Rankin, T. E., University of Michigan.  
Riddell, The Hon Mr Justice  
Roddick, Lady  
Roos, Professor, Groningen  
Rosebrugh, Professor, Toronto.  
Rosenberger, J L., Chicago.  
Scwab, Maurice, Nantes.  
Schwartz, Bureau of the Mint, United States Treasury Department.  
See, T. T J., Montgomery City.  
Sharp, William, New York.  
Shelton, T. W., Norfolk, Va  
Smith, Dr., University of Pennsylvania.  
Squair, Professor, Toronto.  
Stoll, Sir Oswald, London.  
Stroheneyer, C E., Manchester.  
Taylor, Dr., Philadelphia.  
Thompson, Slason, Chicago.  
Tremblay, Jules, Ottawa  
Tupman, Mrs., New York.  
Tyrell, J. B., Toronto.  
Vail, Dr S, Cincinnati.  
Vilar, Dr. Albert, Longwy  
Walker, Sir Edmund, Toronto.  
Wrong, Professor G. M, Toronto.

## PORTRAITS AND WORKS OF ART

The following portraits and works of art have been presented to the University:

1. A portrait of the late Hon. William Hume Blake (oil painting by T. Hamel), presented by the Hon. Edward Blake.

2. A portrait of the Hon. Edward Blake, Chancellor 1876-1900 (oil painting by E. Wyly Grier), presented by graduates and friends.

3. A portrait of Professor E. J. Chapman (oil painting by Miss Frances Sutherland), presented by the artist.

4. A portrait of the late Professor Henry Holmes Croft (oil painting by A. Dickson Patterson), presented by friends of Professor Croft.

5. A portrait of the late President, Dr. McCaul (oil painting by A. Dickson Patterson), presented by the artist.

6. A portrait of the late Hon. Thomas Moss, Chief Justice of Ontario, Vice-Chancellor 1875-1881 (oil painting by Miss C. S. Berthon, copy of oil painting by M. Berthon), presented by the Hon. Charles Moss, Chief Justice of Ontario, Vice-Chancellor of the University.

7. A portrait of the late Right Reverend Bishop Strachan (oil painting copy), presented by the Council of University College.

8. A portrait of the late President, Sir Daniel Wilson (oil painting by A. Dickson Patterson), presented by friends of Sir Daniel Wilson.

9. A portrait of Professor E. J. Chapman (oil painting by A. Dickson Patterson), presented by graduates and friends.

10. A marble bust of the late Professor George Paxton Young (by Hamilton McCarthy), presented by friends of Professor Young.

11. A portrait of the late Professor George Paxton Young (oil painting by W. Allaire Shortt), presented by the artist.

12. A steel engraving of Sir John Colborne, afterwards Lord Seaton, Lieutenant-Governor of Upper Canada from 1830 to 1838, presented by Mr. Henry Hutchison.

13. "The Call to Duty" (oil painting by Paul Giovanni Wickson), presented to the Medical Faculty by the artist.

14. "The Marriage of the Duke of York" and "The King of Denmark's First Visit," commemorative medals, presented by the Town Clerk of London, Eng.

15. A bronze medal commemorative of the sesquicentennial anniversary of the founding of the College of New Jersey (Princeton University), presented by the trustees of Princeton University.

16. A bronze medal commemorative of the 150th anniversary of the capture of Louisbourg in 1745, presented by the Louisbourg Memorial Committee of the General Society of Colonial Wars.

17. A bronze medal commemorative of the 50th anniversary of Sir George Gabriel Stokes' appointment to a professorship in the University of Cambridge.

18. Busts of Dr. W. T. Aikins, Dr. J. H. Richardson, and Dr. H. H. Wright, by the Medical Faculty and other friends.

19. A bust of the late Hon. George Brown, and a portrait of the late Professor Croft, by Dr. Reeve.

20. Portraits of their Royal Highnesses the Prince and Princess of Wales, presented by their Royal Highnesses as a souvenir of their visit to the University in 1901.

21. A portrait of the Hon. Sir William Mulock, LL.D., ex-Vice-Chancellor of the University, presented by members of the Senate and other friends.

22. A steel engraving after Turner, by the late Sir Daniel Wilson, presented by Charles James Heywood, Esq., Manchester, Eng.

23. A collection of medals and coins, bequeathed by the late Dr. Scadding.

24. A portrait of Professor Goldwin Smith, presented by J. Ross Robertson, Esq.

25. A portrait of Dr. John Hoskin (oil painting by Robert Harris), presented by members of the Board of Governors and of the Senate and other friends.

26. A portrait of Dr. Maurice Hutton, Principal of University College (oil painting by William Cruikshank), presented by the Board of Governors

27. A portrait of Sir Daniel Wilson, late President of the University of Toronto (oil painting by Sir George Reid), presented by members of the Board of Governors and of the Senate and other friends.

28. A portrait of Dr. R. A. Reeve (oil painting by Curtis Williamson), presented by members of the Board of Governors and of the Senate and other friends.

29. A portrait of Dr. John Galbraith (oil painting by J. W. L. Forster), presented by graduates of the Faculty of Applied Science.

30. A portrait of Dr. James Loudon, ex-President of the University of Toronto (oil painting by William Orpen), presented by the members of the Senate and other friends.

31. A portrait of Dr. James Loudon (oil painting by Frederick Victor Poole), presented by Mrs. Loudon.

32. A portrait of the Hon. Sir William Ralph Meredith, LL.D., Chancellor of the University (oil painting by William Strang),

presented by members of the Board of Governors and of the Senate and other friends.

33. A portrait of the late Hon. Joseph Curran Morrison, Chancellor of the University of Toronto, 1860-1876 (oil painting by Charles Hayward) presented by Judge Hardy of Brockville.

34. A portrait of Dr. William Henry van der Smissen, Professor Emeritus of German in University College (oil painting by Professor Philip Otto Schafer), presented by Mrs. van der Smissen.

35. A bronze medal commemorative of the 300th Anniversary of the founding of the University of Groningen.

36. A portrait of the late John Langton, M.A., Vice-Chancellor of the University of Toronto, 1856-1861 (oil painting by E. Wyly Grier) presented by his surviving sons, W. A. Langton, John Langton and H. H. Langton.

37. A portrait of the late Larratt William Smith, D.C.L., K.C., Vice-Chancellor of the University of Toronto, 1873-1875 (oil painting by G. T. Berthon), presented by his family.

38. "C'est l'Empereur" (oil painting by H. de T. Glazebrook), presented by the artist.

39. A portrait of the late William Oldright, M.A., M.D., Professor of Hygiene in the University of Toronto, 1887-1910 (oil painting by E. Wyly Grier), presented by his children.

40. A portrait of James Mavor, Ph.D., Professor of Political Economy in the University of Toronto (oil painting by Horatio Walker, Esq., LL.D.), presented by the artist.

41. A portrait of Charles Vincent Massey, M.A., a member of the Board of Governors of the University (oil painting by F. H. Varley), presented by friends of Mr. Massey.

42. A portrait of Robert Ramsay Wright, M.A., D.Sc., LL.D., Vice-President and Dean of the Faculty of Arts of the University of Toronto, 1901-1912, and Professor Emeritus of Biology (oil painting by Arnesly Brown), presented by the Board of Governors.

43. A portrait of Alfred Baker, M.A., LL.D., Dean of the Faculty of Arts of the University of Toronto, 1912-1919, Professor Emeritus of Mathematics (oil painting by E. Wyly Grier), presented by members of the Board of Governors of the Senate and other friends.

44. A portrait of William Hodgson Ellis, M.A., M.B., LL.D., Dean of the Faculty of Applied Science and Engineering of the University of Toronto, 1914-1919, and Professor Emeritus of Applied Chemistry (oil painting by E. Wyly Grier), presented by the members of the staff of the Faculty of Applied Science and Engineering.

45. Fifteen water-colour sketches of Canada and Edinburgh by Sir Daniel Wilson, purchased by the Board of Governors.

46. A portrait of Chester Daniel Massey, a member of the Board of Governors of the University from 1906 until 1920 (oil painting by F. H. Varley), presented to the University by the Board of Governors.

47. A collection of engravings of Old Montreal, done by the late Mr. Learmont, from paintings by H. Bunnett, and presented by Mrs. Learmont, of Montreal.

48. A portrait of Professor Irving Heward Cameron, M.B., LL.D., Professor of Surgery in the University of Toronto, 1897-1920 (oil painting by F. H. Varley), presented to the University by the graduates of the Faculty of Medicine.

49. A portrait of the late Professor John Joseph Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology in the University of Toronto, 1900-1922, (oil painting by Allan Barr), presented to the University by friends of Professor Mackenzie.

50. A portrait of Professor John Squair, B.A., Emeritus Professor of French, in University College (oil painting by J. W. L. Forster), presented by friends and associates of Professor Squair

51. A portrait of Professor Frederick Grant Banting, M.C., M.D., LL.D., D.Sc., Professor of Medical Research in the University of Toronto (oil painting by Curtis Williamson), presented by members of the class of 1917 in Medicine and friends.

## UNIVERSITY OF TORONTO STUDIES

The following is a list of studies published before April, 1925:

## HISTORY AND ECONOMICS

- Review of Historical Publications relating to Canada, edited by Professor GEORGE M. WRONG and H. H. LANGTON.  
 Vols. I.-XXII, Publications of the years 1896-1918  
 Vols. 2, 3, 5-22 (in cloth), each ..... \$2.00  
 Vols. 1 and 4 ..... o.p.  
 Index to Vols. I.-X., XI.-XX., each .. 2.00
- The Review of Historical Publications has ceased to appear, being merged in a new publication, The Canadian Historical Review, a quarterly, annual subscription ..... 2.00  
 (Vols. I.-V. completed.)
- History and Economics, Vol. I. comprising
1. Louisbourg in 1745, the anonymous "Lettre d'un Habitant de Louisbourg," edited and translated by Professor GEORGE M. WRONG ..... 1.00
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No. 110: Action of a solution of potassium hydroxide in alcohol on oxalic esters, by N. C. QUA and D. McLAREN....	0.25
No. 111: The effect of chlorine on periodic precipitation, by Miss A. W. FOSTER .....	0.25
No. 112: The scattering of light by dust-free liquids, by W. H. MARTIN .....	0.25
No. 113: Friedel and Crafts' reaction—nitrophthalic anhydrides and acetylaminophthalic anhydrides with benzene and aluminum chloride, by W. A. LAWRENCE .....	0.25
No. 114: Toxicity and chemical potential, by W. LASH MILLER .....	0.25

No. 115: The toxicity towards anthrax and staphylococcus of solutions containing phenol and sodium chloride, by J. S. LEMON .....	0.25
No. 116: Some phenomena observed in electric furnace arcs, by J. KELLEHER .....	0.25
No. 117: The toxicity of mercuric chloride and its solubility in aqueous alcohol, by J. STANLEY LAIRD. The toxicity towards staphylococcus of dilute phenol solutions containing sodium benzoate, by KENNETH E. BURGESS ...	0.25
No. 118: The action of methylene-blue and certain other dyes on living and dead yeast, by CHARLES G. FRASER .....	0.25
No. 119: The chemical potential of phenol in solutions containing salts, and the toxicity of these solutions towards anthrax and staphylococcus, by J. STANLEY LAIRD .....	0.25
No. 120: Coagulation of colloidal solutions by electrolytes, by E. F. BURTON and Miss E. BISHOP.....	0.25
No. 121: The effect of alcohol on the toxicity of phenol towards yeast, by ELLIS T. FULMER .....	0.25
No. 122: Methylene-blue as indicator in determining the toxicity of phenol and phenol-salt solutions towards yeast, by CHARLES G. FRASER .....	0.25
No. 123: Friedel and Crafts' reaction, by MAURICE E. SMITH, H. N. STEPHENS, and T. C. MCMULLEN.....	0.25
No. 124: The acclimatization of yeast to ammonium fluoride and its reversion in wort, by ELLIS T. FULMER .....	0.25
No. 125: Friedel and Crafts' reaction: Some substituted phthalic anhydrides with toluene and aluminum chloride, by WALTER A. LAWRENCE .....	0.25
No. 126: Coagulation of colloidal solutions of arsenious sulphide by electrolytes, by E. F. BURTON and E. D. MAC-INNES .....	0.25
No. 127: The rate of formation and the yield of yeast in wort, by NORMAN A. CLARK .....	0.25
No. 128: The scattering of light: Note on Wolski's paper on optically empty liquids, by FRANK B. KENRICK; The scattering of light by dust-free liquids, II., by W. H. MARTIN and S. LEHRMAN .....	0.50
No. 129: The pressure-volume relation of superheated liquids, by K. L. WISMER .....	0.50
No. 130: The relation between light-absorption and light-scattering for liquids, W. H. MARTIN .....	0.50
No. 131: The melting interval of certain under-cooled liquids, with a note on the use of liquid air as a refrigerant, by JOHN BRIGHT FERGUSON .....	0.50

No. 132: The Friedel and Crafts' reaction with phthalic anhydride, by T. C. McMULLEN .....	0.50
No. 133: The diffusion of hydrogen and helium through silica glass and other glasses, by G. A. WILLIAMS and J. B. FERGUSON .....	0.50
No. 134: The melting and freezing point of sodium chloride, by JOHN BRIGHT FERGUSON .....	0.50
No. 135: Light scattering: Bibliography, by W. H. MARTIN..	0.50
No. 136: The scattering of light by dust-free liquids—changes with temperature, by W. H. MARTIN and S. LEHRMAN .....	0.50
No. 137: The relation between current, voltage, and the length of carbon arcs, I, by A. E. R. WESTMAN .....	0.50
No. 138: The oxides of iron, by JOHN B. FERGUSON .....	0.50
No. 139: Some preparations from Maleic and Fumaric Acids, by HAROLD G. ODDY .....	0.50
No. 140: The scattering of light by liquids: Effect of direction on polarization and intensity, by W. H. MARTIN; and other papers from the department of chemistry ....	0.50
No. 141: Multiple electrode systems, by A. HAROLD HEATLEY .....	0.50
No. 142: Wildier's Bios, by W. LASH MILLER.....	0.50
No. 143: The solubility of helium and hydrogen in heated silica glass and the relation of this to the permeability, by G. A. WILLIAMS and J. B. FERGUSON .....	0.50
No. 144: The electrolysis of soda-lime glass. Evolution of gas and its relation to sorption and conductivity, by J. W. REBBECK and J. B. FERGUSON .....	0.50
No. 145: The relation between current, voltage and the length of carbon arcs, II, by A. E. R. WESTMAN and W. J. CLAPSON .....	0.50
No. 146: The fractionation of bios, and comparison of bios with vitamins B and C, by GEORGE H. W. LUCAS....	0.50
No. 147: The relation between the depolarization of the scattered light, and the Kerr effect in liquids, by W. H. MARTIN .....	0.50
No. 148: Superheating of liquids, by F. B. KENRICK, C. S. GILBERT, and K. L. WISMER .....	0.50
No. 149: Supersaturation of gases in liquids, by F. B. KENRICK, K. L. WISMER, and K. S. WYATT .....	0.50
No. 150: Some derivatives of acenaphthene, by FRED LORRIMER .....	0.50
No. 151: Toxicity of acids towards yeast, by Miss E. M. TAYLOR, and other papers from the Department of Chemistry .....	0.50

## THESES ACCEPTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FREDERICK HUGHES SCOTT. 1900.

The Structure, Micro-Chemistry and Development of Nerve Cells, with special reference to their nuclein compounds. University of Toronto Studies, Physiological Series No. 1, 1900. Transactions of the Canadian Institute. 1898-99, Vol. 6, Parts 1 and 2, pp. 405-438.

JOHN CUNNINGHAM McLENNAN. 1900.

Electrical Conductivity in Gases Traversed by Cathode Rays. 1900. Philosophical Transactions of the Royal Society of London Series A, Vol. 195, pp. 49-77.

WILLIAM ARTHUR PARKS. 1900.

The Huronian of the Basin of the Moose River. University of Toronto Studies, Geological Series, No. 1, 1900.

FRANCIS BARCLAY ALLAN. 1901.

The Basic Nitrates of Bismuth, 1901. American Chemical Journal, Vol. XXV., No. 4, April, 1901, pp. 307-315.

ROSS GEORGE MURISON. 1902.

The Mythical Serpents of Hebrew Literature, 1902.

RICHARD DAVIDSON. 1902.

The Semetic Permiansive-Perfect, 1902.

WALTER REUBEN CARR. 1903.

On the Potential Difference required to produce electrical discharges in gases at low pressure, an extension of Paschen's Law. Transactions of the Royal Society of Canada, Second Series, 1902-03. Vol. VIII, section III., pp. 161-182. 1902.

On the Laws governing electric discharges in gases at low pressures. Philosophical Transactions of the Royal Society of London, Series A, Vol. 201, pp. 403-433.

EMMA SOPHIA BAKER. 1903.

Experiments on the Æsthetic of Light and Colour. University of Toronto Studies, Psychological Series, Vol. I., No. 4.

Spectrally Pure Colours in Binary Combinations. University of Toronto Studies, Psychological Series, Vol. II., No. 3. 1902.

GEORGE GALLIE NASMITH. 1903.

The Chemistry of Wheat Gluten.

University of Toronto Studies, Physiological Series, No. 4.

The Transactions of the Canadian Institute, Vol. VII. 1903.

CLARA CYNTHIA BENSON. 1903.

The Rates of Reactions in Solutions containing Ferrous Sulphate, Potassium Iodide and Chromic Acid.

The Journal of Physical Chemistry, May, 1903, pp. 356-388.

WILLIAM EDINGTON TAYLOR. 1908.

The Ethics and Religious Theories of Bishop Butler.

Toronto: The Bryant Press. 1908.

THOMAS EAKIN. 1905.

The Text-book of Habakkuk, chap. I. 1-II. 4.

Toronto: E. D. Apted, n.d.

THOMAS RUTHERFORD ROBINSON. 1906.

Stereoscopic Vision and its relation to Intensity and Quality of Light Sensation. University of Toronto Studies. Psychological Series Vol. II., Nos. 2 and 3. Reprint. n.d.

JOHN RANSON ROEBUCK. 1906.

The rate of the Reaction between Arsenious Acid and Iodine in Acid Solution; the rate of the reverse Reaction; and the Equilibrium between them.

The Journal of Physical Chemistry, Vol. VI., p. 365, and Vol. IX., p. 727. Reprint. n.d.

MAITLAND CREASE BOSWELL. 1907.

The Course of the Oxidation of  $\alpha$ -Naphthoquinone to Phthalic Acid and the Detection and Estimation of  $\alpha$ -Naphthoquinone,  $\beta$ -Naphthoquinone, Phthalonic Acid and Phthalic Acid.

Toronto: The University Press. n.d.

RALPH EMERSON DELURY. 1907.

The Rate of Oxidation of Arsenous Acid by Chromic Acid and the Induction of Arsenous Acid by the Reaction between Chromic and Hydriodic Acids.

The Journal of Physical Chemistry, Vol. XI. Reprint. n.d.

DAVID STRATHY DIX. 1908.

Complementarism; Physical and Psychical. University of Toronto Studies. Reprint. n.d.

AUSTIN PERLEY MISENER. 1909.

The Place of Hosea I.-III. in Hebrew Literature.

Toronto: E. D. Apted. n.d.

JOHN FRANCIS MACKEY. 1909.

Part I.: Some Esters of Arsenious Acid.

Part II.: Some Esters of Antimony Trioxide. Reprint. n.d.

CALVIN ALEXANDER MCRAE. 1910.

The Hebrew Text of Ben Sira (Ecclesiasticus).

Toronto: Queen Printing Co. n.d.

WILLIAM ROBERT TAYLOR. 1910.

The Originality of the Hebrew Text of Ben Sira in the light of the Vocabulary of the Versions.

Toronto: E. D. Apted. n.d.

WALTER DANIEL BONNER. 1912.

Experimental Determination of Binodal Curves, Plait Points, and Tie Lines in Fifty Systems, each consisting of Water and Two Organic Liquids.

ELI FRANKLIN BURTON. 1910.

On the Physical Aspect of Colloidal Solution. University of Toronto Studies, Physical Series, No. 36.

SAUL DUSHMAN. 1912.

The Behaviour of Copper Anodes in Chlorine Solutions.

The Journal of Physical Chemistry, Vol. XIV. Reprint. n.d.

JOSEPH ROY SANDERSON. 1912.

The Relation of Evolutionary Theory to Ethical Problems.

ABSALOM COSENS. 1913.

A Contribution to the Morphology and Biology of Insect Galls.

VIVIAN ELLSWORTH POUND. 1913.

I. The Absorption of the Different Types of Beta Rays together with Study of the Secondary Rays excited by them.

II. On the Secondary Rays excited by the Alpha Rays from Polonium. Part I.

On the Secondary Rays excited by the Alpha Rays from Polonium. Part II.

PERCIVAL WILSON SPENCE. 1913.

Moray Transitions in Israel Between 1200 and 700 B.C.

EDWARD MOORE JACKSON BURWASH. 1914.

The Geology of Michipicoten Island.

ROBERT CORNELL ARMSTRONG. 1914.

Light from the East, Studies in Japanese Confucianism.

SAMUEL BEATTY. 1915.

Extensions of Results Concerning the Derivatives of an Algebraic Function of a Complex Variable.

ROY BALMER LIDDY. 1915.

The Relation of Science and Philosophy.

JAMES BERTRAM COLLIP. 1916.

On the Formation of Hydrochloric Acid in the Gastric Tubules in the Vertebrate Stomach.

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A Study of Certain Minerals from Cobalt, Ontario.

WILLIAM HARVEY MCNAIRN. 1916.

Growth of Etch Figures.

EDWIN JOHN PRATT. 1917.

Studies in Pauline Eschatology and its Background.

- HENRY FRANKLIN DAWES. 1918.  
Image Formation by Crystalline Media.  
A Lens Refractometer.  
On the Ionisation by Collision in the gases Helium and Argon.
- RAYMOND COMPTON DEARLE. 1919.  
Some Investigations in the Infra-Red Regions of the Spectrum.
- ELLIS INGHAM FULMER. 1919.  
The Action of Certain Poisons and of Ammonium Fluoride on Yeast.
- ARCHIBALD BRUCE MACALLUM. 1919.  
The Relation of Vitamines to the Growth of Young Animals.
- MOSSIE MAY WADDINGTON. 1919.  
The Development of British Thought from 1820 to 1890.
- JAMES HERBERT WHITE. 1919.  
On the Biology of *Fomes Applanatus*.
- FULTON HENRY ANDERSON. 1920.  
Substance in John Locke's Theory of Knowledge.
- HAROLD KEITH BOX. 1920.  
Dental and Associated Tissues.
- EDWARD HORNE CRAIGIE. 1920.  
On the Relative Vascularity of Various Parts of the Central Nervous System of the Albino Rat.
- ROBERT KAY GORDON. 1920.  
John Galt.
- KENNETH HAY KINGDON. 1920.  
Low Voltage Ionisation.  
Phenomena in Mercury Vapour.  
The Magnetisation of Ships and its Application to the Operation of Magnetic and Electro-magnetic Devices External to the Ship.
- NORMAN ASHMELL CLARK. 1921.  
The Growth Rate of Yeast.
- WALTER ALBERT LAWRENCE. 1921.  
(1) Friedel and Crafts' reaction—intrphthalic anhydrides and acetylaminophthalic anhydrides with benzene and aluminium chloride. (2) Friedel and Crafts' reaction.
- MAURICE EDWARD SMITH. 1921.  
Friedel and Crafts' Reaction—the carbmethoxy—benzoyl chlorides with aromatic hydrocarbons and aluminium chloride.
- GEORGE HOWARD BROTHER. 1922.  
A Study of Some Periodic Phenomena in Electro-Chemistry.
- GEORGE HENRY DUFF. 1922.  
The Development of the Geoglossaceae.

- WALTER RAYMOND FETZER. 1922.  
The Periodic Phenomena observed during the Electrolysis of Aqueous Solutions of Sodium Sulphide.
- OLIVER HENRY GAEBLER. 1922.  
Creatine and Creatinine.
- THOMAS CREIGHTON McMULLEN. 1922.  
Friedel and Crafts' Reaction: the Intermediate Compounds formed, their properties and Reactions.
- HENRY ALLEN McTAGGART. 1922.  
Electrification of Liquid Surfaces.
- WILLIAM HOWARD MARTIN. 1922.  
The Scattering of Light by Dust-free Liquids.
- PAUL MICHAEL O'SULLIVAN. 1922.  
Studies on the Pathological Physiology of Shock.
- WILLIAM SPAFFORD DYER. 1923.  
Stratigraphy and Palaeontology of the Credit River Section of the Upper Cincinnati Series of Ontario.
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A Comparative Study of the Abdominal Musculature of Orthopteroid Insects.
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- ROBERT JAMES LANG. 1923.  
High Potential Spark Spectra.
- GEORGE HERBERT WILLIAM LUCAS. 1923.  
Chemical Study of Bios
- CHARLES CLIFFORD MACKLIN. 1923.  
The Skull of a Human Fetus of 43 Millimeters Greatest Length.
- HAROLD GRANT ODDY. 1923.  
Friedel and Crafts' Reaction—Some preparations from Maleic and Fumaric Acids.
- WILLIAM WALKER SHAVER. 1923.  
Some Researches in Spectroscopy and Permeability.
- GORDON MERRITT SHRUM. 1923.  
Some Experiments in Spectroscopy and Low Temperatures.
- HAROLD BOYD SIFTON. 1923.  
Some Characters of Xylem Tissue in Cycads.  
The Bar of Sanio and Primordial Pit in the Gymnosperms.
- WILLIAM EWART STAPLES. 1923.  
The Elihu Speeches in the Book of Job.



MISS JESSIE GERTRUDE WRIGHT. 1923.

The Pit-Closing Membrane in the Wood of the Lower Gymnosperms.

JOHN FRANCIS TODD YOUNG. 1923.

Studies in Spectroscopy and Magnetism.

FRANK BOLTON ADAMSTONE 1924.

The Distribution and Economic Importance of the Bottom Fauna of Lake Nipigon.

GARVEN HUGH BERKELEY. 1924.

Studies on Botrytis.

HENRY BORSOOK. 1924

The Synthesising Action of Pepsin.

JAMES TRESAWNA BURT-GERRANS. 1924.

The Diffusion of Copper in Solutions of Copper Sulphate containing Sulphuric Acid.

DONALD MUNRO FINDLAY. 1924.

The Reaction of Aqueous Alcoholic Solutions.  
Insulin and some basic dyestuffs.

RUSSELL EARLE FOERSTER 1924.

Studies in the Ecology of the Sockeye Salmon.

MISS CLARA WINIFRED FRITZ 1924.

Cultural Criteria for the Distinction of Wood-destroying Fungi.

ALEXANDER HENRY LEIM. 1924.

The Life History of the Shad (*Alosa Sapidissima*) with Reference to the Factors Limiting its Abundance.

FREDERICK REGINALD LORRIMAN. 1924.

Some Derivatives of Acenaphthene.

MISS FLORA ISABEL MACKINNON. 1924.

The Philosophical Writings of Henry More.

PETER JOSEPH MOLONEY. 1924

On the Purification of Insulin.

JOSEPH ALAN MORRELL. 1924

Kinetics of Arginase.

MISS EDITH MARJORY TAYLOR. 1924.

The Action of Acids on Yeast.

PERCIVAL SIDNEY WARREN. 1924.

The Geology of the Banff Area

ALBERT ERNEST ROBERTS WESTMAN. 1924.

The Relation Between Current Voltage and Length of Carbon Arcs.

DONALD STUART AINSLIE. 1925

Miscellaneous Researches on Magnetic devices and Spectroscopy.

EDNA VICTORIA EASTCOTT. 1925.

The Biogens and Their Relation to the two Bioses

HELEN ELIZABETH FISHER. 1925.

Professional Associations in Canada.

ALBERT HALDANE GEE 1925.

The Influence of Sodium Chloride and other Salts on the Growth and Metabolism of Yeast.

ANDREW ROBERTSON GORDON 1925.

Polarization and Concentration change at the Electrode

WILFRED BRENTON KERR. 1925.

The Reign of Terror in France

ALEXANDER LACEY. 1925

The Romantic Drama in France considered in relationship with the Melodrama of the early Nineteenth Century.

EZRA HENRY MOSS. 1925.

Uredinia and Hausteria of the Pucciniastreae.

JOHN ANGUS NICHOLSON. 1925.

The Philosophical Teaching of L. T. Hobhouse.

WALTER NOBLE SAGE. 1925

Sir James Douglas and British Columbia

DAVID ALYMER SCOTT. 1925.

The Chemical and Biochemical behaviour of Insulin.

PAUL ANTHONY WILSON WALLACE 1925.

Shakespeare and His Printers.

ARTHUR MARSHALL WYNNE 1925.

The Influence of Acids on the Growth and Metabolism of the *Bacillus Granulobacter Pectinovorum*.

## EXTENSION LECTURES

These lectures are offered to the public so that it may be possible for those interested, in any part of Ontario, to avail themselves of either single lectures or short courses of lectures on literary and scientific subjects. If requests are made for lectures not found on the present list, an effort will be made to provide them.

The cost of each lecture, if given within the Province of Ontario, consists of the lecturer's travelling and entertainment expenses, plus five dollars. On his return from delivering a lecture, the professor reports to the Extension Office the amount of his expenses, this information is sent forward to the person who arranged for the lecture and a cheque, made payable to the lecturer and at par in Toronto, is then to be mailed to the Extension Office.

During the session of 1922-23 several series of lectures on Social Hygiene were arranged in a number of centres in the Province. A list of the lectures available this year, with names of lectures, will be sent on request.

The Faculty of Medicine, University of Toronto, in co-operation with the Ontario Medical Association, offers lectures to medical organizations throughout Ontario. Particulars regarding these may be obtained from the Secretary of that Faculty.

All correspondence with regard to lectures, and all money paid for lectures or for lecturers' expenses, should be sent to the Director, University Extension, University of Toronto.

E. A. ALLCUTT, M.Sc., Birmingham.

1. The Panama Canal. (Illustrated.)
2. Volcanoes. (Illustrated.)
3. Machines for Testing Materials. (Illustrated.)
4. Diesel Engines. (Illustrated.)
5. Mond Gas Plants. (Illustrated.)
6. Suction Gas Plants (Illustrated.)

LOUIS ALLEN, Ph.D., Chicago.

1. The International Language Movement (Esperanto.)

G. R. ANDERSON, M.A., A.M., Harvard.

A. Various Phases of Illumination:

1. House Lighting. (Illustrated.)
2. Industrial Lighting. (Illustrated.)
3. Lighting of Public Buildings. (Illustrated.)
4. Street Lighting. (Illustrated.)

## B. Photography.

1. Landmarks in the Development of Photography. (Illustrated)
2. Applications of Photography. (Illustrated)
3. Photography in Colour (Illustrated.)

## J. T. BURT-GERRANS, Phm B., M.A.

1. Automobile Storage Batteries. (Illustrated)

## E. F. BURTON, B.A., Cantab, Ph D.

1. The Properties of Colloidal Solutions (With experimental illustrations.)
2. Liquid Air. (With experimental illustrations)
3. The Structure of the Atom. (Slides)

## J. HOME CAMERON, M.A.

1. French Art. (Illustrated.)

## C. A. CHANT, M A., Ph.D., Harvard

1. The Einstein Theory and the Australian Eclipse.
2. The Universe of Stars
3. Our Little System and the Great Beyond.
4. The Planet Mars.

## W. H. CLAWSON, B.A., N.B., M.A., Ph D, Harvard.

1. Shakespeare's Theatre. (Illustrated)
2. The Popular Ballads in Britain and America.

## A. P. COLEMAN, M.A., Ph D, Breslau, F.R.S., LL.D.

1. Geology: The Ice Age, Mountain Building, the Tooth of Time, Volcanoes, Ancient Ice Ages.
2. Geography: The Rocky Mountains, Labrador, Gaspé, South America, South Africa, Australia and New Zealand, India and the Far East, Scandinavia and Spitsbergen, Mexico. (All illustrated.)

## G. A. CORNISH, B.A

1. Egypt in the Days of Tutankhamen. (Illustrated.)
2. The Japanese and their Industries. (Illustrated)
3. Palestine and Mesopotamia. (Illustrated)
4. Canadian Railways (Illustrated)
5. The New Europe. (Illustrated.)
6. Our Greatest Travellers. (A Lecture on Birds) (Illustrated.)
7. The History of the Great Lakes.
8. Niagara Falls.

9. The Romance of the Cotton Plant. (Illustrated)
10. The World's Food Supply, or Agriculture of the Future.
11. Turkey and Armenia. (Illustrated)
12. Canada's Second Story. (A Lecture on Northern Canada.) (Illustrated)

NOTE—Coloured lantern slides and, in some cases, moving-picture films are used to illustrate these lectures.

E. A. DALE, M.A., Oxon

1. Algernon Charles Swinburne
2. The Roman Plays of Shakespeare and Jonson Compared
3. Ballad Poetry
4. Some English Mystical Poets.
5. Greek Tragedy and the Greek Theatre.
6. The Genius of Sir Walter Scott
7. Theories of the Primitive Life and Development of Man in Greek and Latin Literature.
8. The Value of the Greek and Latin Classics to the Modern World.
9. The Vanishing Art of Reading Aloud—What to Read and How to Read It
10. The Roman World in the Early Days of Christianity

SAINT-ELME DE CHAMP, B. ès L., Lyons, O.I.P.

1. Maria Chapdelaine
2. Erckmann-Chatrian.
3. Pasteur.
4. The Religious Question in France
5. The French in Quebec
6. For a Better Understanding of France.

R. D. DEFRIES, M.D., D.P.H.

1. Health Education in Relation to Local Public Health Organization and Administration.
2. The Value of the Practice of Preventive Medicine to the Layman.
3. Method of Preparation of Vaccines, Antitoxins and Serums and their use in the Control of Communicable Diseases. (Illustrated.)

O. W. ELLIS, M.Sc., Birmingham.

1. Brass in the Light of Modern Research. (Illustrated.)
2. Cast Iron in the Light of Modern Research. (Illustrated.) (Short Course of Four Lectures.)
3. Defects in Metals and Alloys. (Illustrated.)
4. The Early History of Iron and Steel. (Illustrated.)

5. The Heat Treatment of Steel. (Illustrated) (Short Course of Four Lectures)

6. The Microscopic Study of Metals and Alloys (Illustrated)

NOTE.—Of these lectures Nos. 2 and 5 are of a rather technical nature.

J. H. FAULL, B A., Ph D., Harvard.

1. Mushrooms—edible and poisonous.

J. G. FITZGERALD, M.D

Single Lectures

1. Public Health Education, its Bearing on Community Welfare.

2. The Preparation of Antitoxins used in Preventing and Treating Communicable Diseases. (Illustrated.)

3. The Value of the Public Health Laboratory to the Community.

Courses of Lectures

1. Etiology, Methods of Spread and Means of Control of some of the Important Communicable Diseases. (Six lectures.)

2. Official and Voluntary Health Promoting Agencies. (Three lectures)

3. How Man Protects Himself against Harmful Bacteria. (Two lectures.)

D. T. FRASER, B.A., M B., D.P H

1. Health Education in Relation to Local Public Health Organization and Administration.

2. The Value of the Practice of Preventive Medicine to the Layman.

3. Method of Preparation of Vaccines, Antitoxins and Serums and their use in the Control of Communicable Diseases. (Illustrated.)

L. GILCHRIST, M.A., Ph.D., Chicago.

1. X-Rays and Radioactive-Radiations, and their Applications.

2. Light Waves and their Uses.

3. The Production of Colour in Insects and Birds.

P. GILLESPIE, B A Sc, C.E., M.Sc.

1. Canadian Engineering Achievements of the Past Fifty Years. (Illustrated.)

2. Sandford Fleming, Engineer. (Illustrated)

E. GOGGIO, A B., Harvard, M A, Tor, Ph D., Harvard.

1. Dante

2. The Great Poets of Modern Italy.

3. Modern Italian Novelists.

4. Women Writers of Present-Day Italy.

5. Literary Relations between Italy and America.

6. Longfellow and Italy.

V. E. HENDERSON, M.A., M.B.

1. A Brief History of Architectural Development in Europe. (Illustrated.)
2. A Comparison of French and English Architecture during the period from 1000-1500 A D
3. A Comparison of the Nervous Systems and Accompanying Habits of some of the Lower Animals.

L. E. HORNING, B.A., Ph.D., Gottingen

1. Salient Features of Canadian History.
2. Canadian Literature
3. The Everlasting Balkans
4. Teuton and Slav: an age-long problem
5. The Vertical Problem of Europe.
6. France and Germany 1100 years and the Rhine
7. The Trend of History to the year 2000.
8. From Serfdom to Democracy

C. D. HOWE, M.S., Vermont, Ph D., Chicago

1. The Making of a Tree (Illustrated.)
2. The Making of a Forest (Illustrated.)
3. Nature's Forest and Man's Forest. (Illustrated.)
4. Forest Conditions in Canada. (Illustrated.)
5. The Work of the Various Forestry Organizations in the Dominion (Illustrated.)

G. W. HOWLAND, B A., M.B., Toronto, M R C P., London.

1. Human Conservatories The Study of Mental Development in our own Homes.

J. G. HUME, B A., A.M., Harvard, Ph D., Freiburg, Baden.

1. Some Educational Problems in Ontario.
  - (a) Problems of the Public Schools. (Urban and Rural.)
  - (b) Problems of the High Schools and Technical Schools.
  - (c) Problems of the University
2. Problems of the Pupil:
  - (a) The Choice of a Life Work.
  - (b) How to Think.
  - (c) The Training of the Memory.
  - (d) The Training of the Imagination.
  - (e) Life's Problems and Life's Ideals. (Individual and Social)

MAURICE HUTTON, M A, Oxon., LL.D.

1. The Roman, Greek, Englishman and Frenchman. (2 lectures or 1.)
2. The Mind of Herodotus (2 lectures or 1 )
3. Greece in the Great War.
4. Some Oxford Types
5. The Art of Lewis Carroll (the author of "Alice in Wonderland").
6. The British and German Mind.
7. Gilbert and Sullivan's Operas. .
8. Kipling (2 lectures or 1 )
9. A Traveller's Notes in Greece.
10. In Paris.
11. The Greek Point of View.
12. Hellenism.
13. Gladstone and Disraeli
14. The Conspiracies of Literature
15. The Fragments that Remain.
16. By-Products of Democracy.

F. C. A. JEANNERET, B.A

1. Brioux and the Modern French Drama.

G. M. Jones, B A

1. The Imperial Conference
2. The Growth of Democracy in Great Britain.
3. The Romance of Canadian History. (Illustrated.)
4. Tennyson's "In Memoriam "

D. R. KEYS, M A.

1. American Humour—Its Genesis and Exodus.
2. King Alfred the Great.
3. Chaucer and his Times. (Illustrated.)
4. The English Novel as a Guide to Conduct
5. Folk Lore.
6. The Modern Novel.
7. Toronto—Past, Present and Future.
8. World Problems of Our Day.

R. S. KNOX, M.A., Aberdeen, B.A., Oxon.

1. Scottish Poetry.
2. The English Drama of To-day.
3. John Masefield.
4. The Plays of John Galsworthy.
5. Scottish Humour
6. The Development of the English Theatre.
7. Shakespeare's England.
8. Some Poets of To-day.



Miss A. L. LAIRD, M.S., Drexel

1. Malnutrition in Children. (Illustrated.)
2. Vitaminis. (Illustrated.)
3. Vegetables and Fruits—a Road to Health. (Illustrated.)
4. The Dietitian in the Home. (Illustrated.)
5. Food—a Factor in National Development. (Illustrated.)

A. T. LAING, B A Sc.

1. Roads, Ancient and Modern. (Illustrated.)
2. Canadian Motor Trails. (Illustrated.)

W. B. LANE, M.A., Ph.D., Wisconsin.

1. Pragmatism and Idealism. (One lecture, or a series.)
2. Ethical Features of the Modern Flux Philosophy (Bergson).  
(One lecture, or a series.)
3. Ethics of Kant (or J. S. Mill or Green) (One lecture, or a series.)
4. Nietzsche's Immoralism. (One lecture.)

R. M. MACIVER, B.A., Oxon, M A., D.Phil., Edin.  
Current Economic Questions.

H S. MCKELLAR, B A.

1. Dr. Drummond, the Habitant Poet—a biographical sketch, his appreciation of the French-Canadian, with the reading of some of his best poems.
2. A Glimpse of Paris—75 lantern slides, with a brief historical and literary back-ground.
3. Robert Burns
4. French Wit and Scotch Humour—A short study in national characteristics

J. F. McLAUGHLIN, B A., D.D., Vic.

1. History and Monuments of Ancient Egypt. (Illustrated.)
2. History and Monuments of Ancient Mesopotamia. (Illustrated.)
3. Mohammed and his Koran.
4. Poetry and Religion of the Arabs.
5. The Hebrew Prophets.
6. The Hebrew Poets.
7. Modern Movements and Changes in Palestine. (Illustrated.)  
(Nos. 5 and 6 can be given in short courses of five or six lectures.)

H. McTAGGART, M.A., B A., Cantab

1. The Study of Crystal Structures by means of X-rays.
2. Colour Photography. (Illustrated.)

E. S. MOORE, M.A., Ph.D., Chicago

1. Coal—Its Nature, Origin and Utilization. (Illustrated.)
2. Petroleum and Natural Gas. (Illustrated.)
3. Canada's Mineral Wealth—Past, Present and Future.
4. Expedition to Hudson Bay, the Home of the Eskimo. (Illustrated.)
5. India (Illustrated.)
6. Volcanoes, and their Geographical Importance. (Illustrated.)

G. H. NEEDLER, B.A., Ph.D., Leipzig

1. The German University.
2. Shakespeare in Germany
3. Heinrich Heine.
4. Richard Wagner from the Literary Side.
5. Germany before the Great War.
6. What has happened to Germany.
7. Series of Lectures on Periods or Authors in German Literature.
8. Goethe's Relations to Scott, Byron, Carlyle and other English Writers.

J. H. Parkin, B.A.Sc., M.E.

1. Aviation in Canada.

W. A. Parks, Ph.D.

1. The Great Fossil Reptiles of Alberta. (Illustrated)
2. The Origin and Development of the Mammalia. (Illustrated.)
3. Northern Ontario, Geological Geography (Illustrated)
4. The Development of the Science of Geology.
5. The Surficial Geology of Ontario. (Illustrated.)

G. D. PORTER, M.B.

1. Health Promotion.
2. Tuberculosis and Public Health.

J. C. ROBERTSON, M.A.

1. A Visit to Greece (Chiefly Athens, Mycenae, Delphi and Olympia). (One to four lectures, illustrated.)
2. The Legacy of Greece. (One lecture or a course of three lectures.)

T. R. ROBINSON, Ph.D.

1. Thought and Life: The nature and scope of Philosophy; its relation to religion, science, literature and daily life.
2. Philosophies of Life: Views of the nature of the universe and man, in their relation to the problems of life and conduct, illustrated by ancient and modern examples.

3. Present-Day Problems in Social Ethics: Modern economic, political and social conditions in their ethical aspects.
  4. The Function of the State in Regard to Morality: What government has to do with making people good.
  5. Charles Dickens and His Social Philosophy.
  6. The Philosophy of Emerson
  7. Tennyson's Doctrine of Immortality in "In Memoriam".
- (Short Courses may be given on the subjects of (1) to (4).)

P. SANDIFORD, M.Sc., Manchester, Ph.D., Columbia.

1. The Measurement of Intelligence (1 to 6 lectures with demonstrations)
2. The Psychology of Childhood. (1 to 6 lectures)
3. The Original Nature of Man. (1 to 6 lectures.)
4. The Psychology of School Subjects (1 to 6 lectures.)

C. B. Sissons, B.A.

1. Co-operation in Theory and Practice.
2. Peculiar Peoples in the Canadian West.
3. The Empire in Ancient and Modern Times.
4. Socrates, Teacher and Citizen.

H. B. Sifton, M.A.

1. Poisonous Plants. (Illustrated—one or a series of lectures)
2. Poisonous Seeds in Feeds. (Illustrated—one lecture)
3. Weeds. (Coloured illustrations—one lecture.)

G. O. SMITH, M.A., Oxon

1. The Roman Occupation of Britain. (One lecture.) (Illustrated.)
2. The Roman Occupation of Britain (A course of three lectures, two of them illustrated)
3. Memoirs and Letters of an English Family in the 17th Century.

R. B. THOMSON, B.A.

1. Rambles among Canadian Wild Flowers. (Coloured lantern slides)
2. Medical Folk-lore of Plants. (Illustrated.)
3. The Royal Botanic Gardens—Kew (Illustrated.)
4. A Trip to the Rockies and Some Plants by the Way. (Illustrated.)

W. S. WALLACE, B.A., M.A., Oxon.

1. The Growth of Canadian National Feeling. (One lecture or a course of lectures).
2. The First White Men in America. (One lecture.)

J. S. WILL, B.A., Ph.D., Columbia.

1. Mediaeval Saints and Modern Sinners. (A lecture on religion in France)
2. France of To-day and Yesterday.
3. Renaissance and Reform (One or more lectures)
4. French Painters (Illustrated)
5. Illustrious French Women. (One or more lectures.)
6. Intellectual Liberty.
7. French Thought in the Nineteenth Century.
8. Canada's Debt to France.

C. R. YOUNG, B.A. Sc., C.E.

1. Achievements of Engineering. (Illustrated.)
2. Early Engineers and Their Work. (Illustrated)
3. Contributions of the Engineer to Civilization.
4. Evolution of Transportation. (Illustrated.)
5. Triumphs of Bridge Building. (Illustrated.)
6. Brindley and Smeaton. (Illustrated.)
7. Sir John Fowler and Sir Benjamin Baker. (Illustrated.)
8. The Aesthetics of Bridges. (Illustrated.)
9. Getting Things Done. (A discussion of the fundamental principles of management.)

DEPT. OF ARCHITECTURE:—Lecturers. Professors C. H. C. Wright, C. W. Jefferys, A. W. McConnell, H. H. Madill.

1. An Outline of the History of Architecture.
2. The University Buildings.
3. Modern Architecture.
4. Modern Domestic Architecture.
5. The Cathedrals of England and France.
6. The Architecture of the French Renaissance.
7. The Architecture of the Renaissance.
8. The Decoration of Public Buildings.
9. The Mural Painters.
10. The Human Element in Pictures
11. The Making of a Picture
12. Portrait Painters of Yesterday and To-day.  
(All illustrated.)

In co-operation with the Social Hygiene Council lectures on various aspects of social hygiene will be arranged when requested. Dr. Gordon Bates and other members of the Council will be available as lecturers

A few sets of lantern slides illustrative of stars, planets, constellations, etc., are available for loan to responsible organizations. An explanatory bulletin accompanies these so that anyone with a fair knowledge of astronomy can give, with the aid of the slides, an interesting lecture on the subject. The organization borrowing these slides pays express charges both ways and is responsible for breakages; there is no other cost. Star maps are sold at one cent each.

## SUPPLEMENTARY LIST

W. H. T. BAILLIE, M.A., M.B.

1. Mammals; Ancient and Modern.
2. The simplest forms of life.
3. Some of the unexplained wonders of living matter.
4. General Biology. What is it and its main problems.
5. The feeding habits of living creatures.
6. Breathing throughout the animal kingdom.
7. Youth, maturity and age in living creatures.
8. Economic and Theoretical Biology contrasted.
9. The physical basis of individuality.

V. W. BLADEN, B.A., Oxon.

1. Josiah Wedgewood, Captain of Industry.
2. The English Potteries.

G. A. CORNISH, B.A.

1. What is going on in Russia. (Illustrated.)

W. J. DUNLOP, B.A.

1. The British Empire Exhibition at Wembley.
2. The Teacher as a Citizen.
3. The Place of Parents in the Educational System. (No fee for these lectures, expenses only.)

E. GOGGIO, A.B., Harvard, M.A., Tor., Ph.D., Harvard.

1. Italian Fascism—its origins and achievements.

MAURICE HUTTON, M.A., Oxon., LL.D.

1. A Retrospect of Fifty Years.
2. National Leagues.
3. Oedipus the King.
4. The Philosophy of Political Parties.

J. G. HUME, B.A., A.M., Harvard, Ph.D., Freiburg, Baden.

1. How to Study.
2. The Higher Success.

HAROLD A. INNIS, M.A., McMaster, Ph.D., Chicago.

1. The Mackenzie River.

W. A. IRWIN, M.A., D.B., Chicago.

1. Some Myths and Legends of Ancient Babylonia.
2. Babylonian Myths and Hebrew Literature.
3. Egyptian Funerary Practice and Beliefs. (Illustrated.)
4. Some Epochs in the History of Ancient Egypt.

HUBERT R. KEMP, M.A.

1. The Causes of Unemployment.
2. Proposed Remedies for Unemployment.
3. Unemployment Insurance.
4. Measuring the Cost of Living.
5. Business Cycles.
6. Taxation in Canada.

D. R. KEYS, M.A.

1. Burns, the Poet of Democracy.
2. Books and Reading for Boys and Girls.

A. T. LAING, B.A.Sc.

1. Canadian Natural Parks.
2. Scenery of the Rocky Mountains.

E. S. MOORE, M.A., Ph.D., Chicago.

1. The Origin of the Earth. (Illustrated.)

G. H. NEEDLER, B.A., Ph D., Leipzig.

1. New Problems of Race, Religion and Politics in Central Europe since the Great War.

E J. PRATT, Ph D.

1. Realism in Contemporary English Poetry.
2. The Poetry of Thomas Hardy

H. L. SEYMOUR, B.A.Sc , C E.

1. Lectures in Town Planning, comprising from one to six lectures. (Illustrated.)

MISS M. K. STRONG, B.A.

1. What the League of Nations is doing for Labour.
2. Some Handicaps of Childhood.
3. Child Psychology.
- 4 The Problems of Childhood.

R. B. THOMSON, B.A.

1. South African, Australian or New Zealand Plants and Conditions. (Illustrated.)

C R. YOUNG, B.A.Sc., C.E.

- 1 Railways.

## THE STAFF OF THE DEPARTMENT OF ARCHITECTURE.

1. The Architecture of the Renaissance Period in Italy.
2. The Architecture of the Renaissance Period in England.
3. The Architecture of England and America during recent years.
4. The Architecture of the Great Capitals of Europe.
  - (a) London.
  - (b) Paris.
  - (c) Rome.
7. A Tour through the Cities of Italy.
8. The Architecture of the Modern School.
9. The Architecture of the Church.
10. The Public Square.
11. Sir Christopher Wren and his Works.

# CATALOGUE OF SPECIAL EVENTS, 1924-1925

1924

- Aug. 13—Convocation at which honorary degrees were conferred on the following members of the British Association for the Advancement of Science.

## *Doctor of Science (Honoris Causa)*

Sir David Bruce, M.B., C.M., D.Sc., LL.D., F.R.S., F.R.C.P.

Monsieur de la Vallée Poussin.

Monsieur Gabriel Koenigs

Sir Charles Algernon Parsons, LL.D., D.Sc.

Sir John Russell, D.Sc.

Sir Ernest Rutherford

Signor Francesco Severi.

Doctor Wladimir Andreevich Stekloff.

- Oct. 3—Debate by teams from the University of Cambridge and the University of Toronto.
- Oct. 5—University Sermon by Sir Robert Falconer.
- Oct. 7—Address by the Rt. Hon. H. A. L. Fisher, former Minister of Education in Great Britain.
- Oct. 12—University Sermon by Rev. Dr MacNeill, Toronto.
- Oct. 14-17—Series of four lectures by the Rt. Rev. A. C. Headlam, D.D., Bishop of Gloucester.
- Oct. 16—Informal Visit of H.R.H. the Prince of Wales, to Hart House.
- Oct. 19—University Sermon by the Rt. Rev. A. C. Headlam, D.D., Bishop of Gloucester.
- Oct. 20-25—"The Romantic Young Lady" by G. M. Sierra, translated by H. Granville-Barker, at Hart House Theatre.
- Oct. 24—Address by John Buchan, England.
- Oct. 28—University Sermon by Dr Sherwood Eddy, New York.
- Nov. 2—University Sermon by Rev. Donald MacGillivray, LL.D., Shanghai
- Nov. 9—University Sermon by Rev. Archdeacon J. B. Fotheringham, Brantford.
- Nov. 11—Memorial Service at the Soldiers' Tower.
- Nov. 16—University Sermon by Professor Rufus M. Jones, Haverford College.
- Nov. 17-22—"At the Hawk's Well" by W. B. Yeats, and "The Shewing Up of Blanco Posnet" by Bernard Shaw, at Hart House Theatre.
- Nov. 23—University Sermon by Dr. Henry Van Dyke, Princeton, N.J.
- Nov. 30—University Sermon by Professor Hugh Black, D.D., Union Theological Seminary, New York.



- Dec. 7—University Sermon by Rev. Dr. Trevor Davies, Toronto.  
 Dec. 14—University Sermon by Dean W. L. Sperry, Harvard University.  
 Dec. 29-Jan. 3—"Musalliance" by Bernard Shaw, at Hart House Theatre.

## 1925

- Jan. 11—University Sermon by the Rt. Rev. Bishop Brent, Buffalo, N.Y.  
 Jan. 18—University Sermon by Dr. John R. Mott, New York.  
 Jan. 19-24—"The Mollusc" by Henry Hubert Davis, at Hart House Theatre.  
 Jan. 23—Lecture by Sir Richard Lodge, M.A., LL.D., Professor of History, University of Edinburgh.  
 Jan. 25—University Sermon by Dr. Richard Roberts, Montreal.  
 Feb. 1—University Sermon by Canon Shatford, Montreal.  
 Feb. 8—University Sermon by Chancellor C. W. Flint, Syracuse University.  
 Feb. 15—University Sermon by Rev. Dr. J. R. P. Sclater, Toronto.  
 Feb. 20-21—Classical Conference at the University of Toronto.  
 Feb. 22—University Sermon by Rev. Dr. J. E. Hughson, Hamilton.  
 Feb. 23-28—"Gold" by Eugene O'Neill, at Hart House Theatre.  
 Mar. 1—University Sermon by Principal D. L. Ritchie, Montreal.  
 Mar. 8—University Sermon by Mr. T. Z. Coe, China.  
 Mar. 15—University Sermon by Principal Clarence McKinnon, Halifax.  
 Mar. 22—University Sermon by Principal Bruce Taylor, Queen's University, Kingston.  
 Mar. 23-28—"The Sabine Women" by Andreyev, and "Riders to the Sea" by J. M. Synge, at Hart House Theatre.  
 Mar. 29—University Sermon by Ven. Archdeacon Renison, Hamilton.  
 Apr. 20-25—"The Freedom of Jean Guichet" by L. A. MacKay.  
 May 4-6—"Outward Bound" by Sutton Vane.  
 May 18-23—"The Winter's Tale" by Shakespeare.  
 June 5—Convocation at which honorary degrees were conferred as follows:

*Doctor of Laws (Honoris Causa)*

Edward Wentworth Beatty, Esq., B.A.  
 Thomas Carscadden, Esq., M.A.  
 Major-General William Egerton Hodgins, C.M.G.  
 Annie Caroline Macdonald, B.A.  
 The Right Reverend Neil McNeil, D.D.

*Doctor of Letters (Honoris Causa)*

Frederick W. Shipley, Esq., Ph.D.

*Doctor of Science (Honoris Causa)*

Charles Edward Saunders, Esq., Ph.D.

*Doctor of Medicine (Honoris Causa)*

Donald Blair Fraser, Esq., M.B.

## UNIVERSITY OF TORONTO ASSOCIATIONS AND SOCIETIES

1924-1925

## THE ALUMNI FEDERATION OF THE UNIVERSITY OF TORONTO

In the majority of the Faculties and Colleges of the University there are associations of alumni. United in the Alumni Federation are the graduates' associations of University College, Victoria College, Medicine, Applied Science and Engineering, and Trinity College. The Federation has numerous branches throughout Canada and the United States. *The University of Toronto Monthly* is the official publication of the Federation.

The Federation raised the University War Memorial Fund and erected the Soldiers' Tower. More than \$165,000.00 has been loaned to 542 returned soldier students towards their University expenses from the War Memorial Fund. Eighteen scholarships and one Graduate Fellowship totalling \$4,100, have been established for the year 1924-1925.

A Bureau of Appointments is conducted for the purpose of assisting graduates and undergraduates in securing employment during the term, for the summer, and permanently.

In February 1925 the Federation nominated eight graduates of the University for appointment by the Lieutenant-Governor to vacancies in the Board of Governors.

In co-operation with the Board of Governors the Alumni Federation has set up the Banting Research Foundation, which aims to make adequate funds available for the assistance of medical research at the University and elsewhere.

For four years a series of popular lectures by members of the Staff has been arranged, in the interests of University publicity.

*President*—Angus MacMurchy.

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*Secretary-Treasurer*—G. A. L. Gibson.

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## FACULTY UNION

Organized 1901

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The Students Administrative Council has developed from the Parliament of Undergraduates which was organized in 1905 with a large membership to afford students of all the Colleges and Faculties the privilege of discussing in open debate questions of interest to them. During the last few years the membership of the Parliament has been reduced as the work became more executive. The Council, as now recognized by the University authorities, has the following duties —

1. To afford a recognized means of communication between University and Civic authorities and the students.
2. To represent the students on public occasions and in matters affecting their interests.
3. To promote inter-University functions.
4. To co-operate with the Women Students Administrative Council under the Joint Executive of the Students Administrative Councils, in the publication of *THE VARSITY*, *TORONTONENSIS*, the *STUDENTS' DIRECTORY*, and such other publications as may be deemed necessary.

Another innovation is the Students' Council fee, collected by the Bursar, for the use of the Council. This makes possible the employment of a salaried permanent secretary and provides a working capital by means of which a greater efficiency in the management of the various organizations can be attained.

The Council is responsible for Inter-University Debating, the Rooters' Club, and control of student discipline through the Students' Court, and jointly responsible with the Women Students' Administrative Council for the publication of *THE VARSITY*, *TORONTONENSIS*, and the *STUDENTS' DIRECTORY*, and the management of the University of Toronto Choral Society.

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<i>University College</i> , L. D. Reid, Miss J. D. Reading.	<i>St. Michael's</i> , J. F. Flaherty, Miss B. V. Larochelle.
<i>Medicine</i> , K. C. McCarthy.	<i>Loretto</i> , Miss M. C. Yates
<i>School of Applied Science and Engi- neering</i> , H. Miller.	<i>Knov</i> , E. L. McCullagh.
	<i>Wyctiffe</i> , J. Atkinson.

## STUDENT CHRISTIAN ASSOCIATION

The object of the Association is to lead the men in the University of Toronto to acknowledge Jesus Christ as Lord and Master, and to have them decide on a life's work in His name; to promote Christian character; to develop and train men for aggressive Christian work and service, and generally to promote the physical, mental and spiritual welfare of the student body.

*Advisory Committee*

<i>Hon. Chairman</i> , Sir Robert Fal- coner, LL.D., D.Litt.	<i>Chairman</i> , F. Tracy, Ph.D
	<i>Treasurer</i> , C. L. Burton, Esq

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<i>General Secretary</i> , R. V. Ferguson.	<i>Treasurer</i> , T. B. Smith

WOMEN'S COUNCIL OF THE STUDENT CHRISTIAN  
ASSOCIATION

<i>Chairman</i> , Miss A. E. Mayhew.	<i>College</i> , Miss E. W. Service; <i>St.</i>
<i>Vice-Chairman</i> , Miss A. E. Hiltz.	<i>Hilda's College</i> , Miss A. N.
<i>Secretary</i> , Miss M. D. Laird	<i>Wilson, Medicine</i> , Miss C. L.
<i>Treasurer</i> , Miss M. E. Thompson	<i>Whittier, Ontario College of</i>
<i>Representatives, University College</i> , Miss O. I. Hetherington, <i>Victoria</i>	<i>Education</i> , Miss M. L. Mc- Cready.

## CANADIAN OFFICERS TRAINING CORPS.

<i>Officer Commanding</i> , Col. W. R. Lang, C.M., late G.S., C.E.F.	<i>Company Officers, "A" Co. (Arts)</i> , Major K. B. Conn, D.F.C., Temp.-Capt R. B. Messervy, Lieuts. J. W. Johnson, L. D. Reid, G. W. M. Webb, M. P. Dean, Prov. Lieut. W. E. Dunbar.
<i>Second in Command</i> , Major T. R. Loudon, late C.E., C.E.F.	
<i>Major (unattached)</i> , H. H. Madill, late instructional Cadre, C.E.F.	
<i>A. Adjutant</i> , Capt. W. J. T. Wright, M.B.E., late C.F.A., C.E.F.	<i>"B" Co. (Medicine)</i> , Major W. G. Cosbie, M.C., Lieuts. L. E. R. Luckey, W. G. Bright, D. L. M. Strebig, W. P. Aberhart, C. D. S. Leef, Prov. Lieut. H. M. Cameron.
<i>Medical Officers</i> , Major J. W. Barton, M.D., Captain H. B. Lang, M.C. (Supernumerary)	<i>"C" Co. (App. Sc.)</i> , Major J. R. Cockburn, M.C., Lieuts. F. J. Milne, H. Miller, H. G. G. Whitton, W. C. Cooper, A. D. Morton
<i>Paymaster</i> , Captain T. A. Reed.	
<i>Quartermaster</i> , Captain W. G. C. Kenney, late R.A.V.C.	
<i>Contingent Sergt-Major</i> , S. M. W. Hunt, late Royal Welch Fusiliers	
<i>Cont. Quarter-Master-Sergeant</i> , Vacant.	

## THE UNIVERSITY OF TORONTO ATHLETIC ASSOCIATION

The Athletic Association is now the paramount body in University athletics, and has entire jurisdiction over the athletic clubs using the University name, and over their finances, members and policy, subject to the University authorities. Henceforth no financial agreement can be entered into by any such club without the sanction of the Directorate. No expenditure of any kind in connection with any such club can be made without the written order of the Secretary-Treasurer of the Directorate.

The offices of the Association are in Hart House where all information can be obtained regarding the various branches of sport. A student who wishes to participate in any line of athletics must register at the office of the Secretary before playing with any club, and undergo a medical examination.

## ATHLETIC DIRECTORATE

*Honorary President*—Sir R. A. Falconer, D. Litt., LL.D., C.M.G.

*Faculty Members Appointed by the President*

Professor M. A. Mackenzie, M.A., President

Professor C. H. C. Wright, B.A.Sc.

*Representatives of the Advisory Board*

Dr. J. A. McCollum

F. C. A. Houston, B.A.Sc.

*Student Members elected by the Undergraduates*

J. A. Mahon	C. R. Weber
R. J. Pequegnat	E. N. Wright
J. C. Patterson	A. W. Jeckell

<i>Representative of Students' Administrative Council</i>	..... R. S. S. Chaffe
<i>Medical Director</i>	..... Dr. G. D. Porter
<i>Secretary-Treasurer</i>	..... T. A. Reed
<i>Hart House Steward appointed by the Athletic Directorate</i>	..... C. R. Weber
<i>Representatives on the Rules Committee of the Intercollegiate Rugby Union</i>	
Hugh Gall	W. C. Foulds

## GYMNASIUM STAFF

*Gymnasium Director*

D. M. Barton

*Gymnasium Instructors*

A. J. Edmonds	W. H. Martin
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*Swimming Instructor*

W. W. Winterburn

## RUGBY CLUB EXECUTIVE

<i>Hon. President</i>	..... Dr. G. E. Westman
<i>President</i>	..... R. J. Pequegnat (U.C. IV)
<i>Vice-President</i>	..... S. A. Snyder (U.C. IV)
<i>Secretary</i>	..... S. H. Robinson (U.C. IV)
<i>Manager I Team</i>	..... D. B. Peeler (Med. IV)
<i>Manager O.R.F.U. Team</i>	..... J. A. Lowden (U.C. III)
<i>Manager II Team</i>	..... Charles Shearson (U.C. IV)
<i>Manager III Team</i>	..... J. L. Goldie (U.C. III)

## SOCCER CLUB EXECUTIVE

<i>Hon. President</i>	..... J. B. Bickersteth, M.A.
<i>Hon. Vice-Presidents</i>	..... Prof. C. B. Sissons
<i>President</i>	..... W. B. Ririe (Med. IV)
<i>Vice-President</i>	..... E. P. Tilley (U.C. IV)
<i>Secretary</i>	..... F. S. Lawson (U.C. IV)
<i>Manager</i>	..... J. F. Dreyer (Med. V)
<i>Captain</i>	..... H. J. Greer (Med. VI)



## ENGLISH RUGBY CLUB EXECUTIVE

<i>Hon. President</i> . . . . .	Prof M. A Mackenzie
<i>Hon Vice-President</i> . . . . .	Prof. C R Fay
<i>President</i> . . . . .	J. F Dreyer (Med V)
<i>Vice-President</i> . . . . .	F. E D Wallace (U.C. III)
<i>Secretary</i> . . . . .	L. F Burpee (Ap Sc. IV)
<i>Manager</i> . . . . .	G. W Smart (Ap Sc. IV)
<i>Captain</i> . . . . .	H M S Pentelow (Ap. Sc. IV)

## TRACK CLUB EXECUTIVE

<i>Hon. President</i> . . . . .	Dr. W. E Brown
<i>Hon. Vice-President</i> . . . . .	Dr. E. H Campbell
<i>President</i> . . . . .	A D. Turnbull (Ap Sc. IV)
<i>Vice-President</i> . . . . .	J A Mahon (St. Michael's IV)
<i>Secretary</i> . . . . .	J F. Millican (Ap. Sc. IV)
<i>Asst.-Secretary</i> . . . . .	R A. Cleghorn (Med. III)
<i>Manager</i> . . . . .	R. H Willard (U.C. III)
<i>Captain</i> . . . . .	I. E. Francis (U C III)

## HARRIER CLUB EXECUTIVE

<i>Hon President</i> . . . . .	Dr. E. H Campbell
<i>Hon. Vice-President</i> . . . . .	Rev. J. P. Dykes, M A.
<i>President</i> . . . . .	C G. Shaver (Med. V)
<i>Secretary</i> . . . . .	G E. Findlay (U.C. III)
<i>Manager</i> . . . . .	J. F. Farnsworth (Med V)

## TENNIS CLUB EXECUTIVE

<i>Hon. President</i> . . . . .	Sir Robert Falconer
<i>Hon Vice-President</i> . . . . .	F Y. McEachren, Esq.
<i>President</i> . . . . .	J. J. Lyons (St Michael's IV)
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<i>Secretary and Manager</i> . . . . .	C. E. Pyne (Vic. III)

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<i>Hon. Vice-Presidents</i> . . . . .	{ H. Gooderham, B.A. W E Douglas, B.A. Prof. J Roy Cockburn
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<i>1st Vice-President</i> . . . . .	W. L. Thompson (Ap. Sc. III)
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<i>Secretary</i> . . . . .	C. F. Bruce (Ap Sc III)
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## SWIMMING CLUB EXECUTIVE

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<i>Vice-President</i> . . . . .	F. W. Beare (U.C. IV)
<i>Secretary</i> . . . . .	R. Van Valkenburg (U.C. III)
<i>Captain (Swimming)</i> . . . . .	J. S. Latchford (U.C. IV)
<i>Captain (Water Polo)</i> . . . . .	P. A. Copeland (U.C. IV)
<i>Manager</i> . . . . .	J. S. Latchford (U.C. IV)

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<i>Hon. Vice-President</i> . . . . .	J. A. M. Bell, B.A.
<i>President</i> . . . . .	H. N. Crighton (U.C. III)
<i>Vice-President</i> . . . . .	J. L. Uren (Med IV)
<i>Secretary</i> . . . . .	C. O. Hutchison (Dent. III)
<i>Manager</i> . . . . .	(To be appointed)

## HOCKEY CLUB EXECUTIVE

<i>Hon. President</i> . . . . .	Louis Hudson (Med. V)
<i>President</i> . . . . .	J. A. Sullivan (Med. V)
<i>Vice-President</i> . . . . .	Jas. W. Robson (Dent. II)
<i>Secretary</i> . . . . .	D. B. Peeler (Med. IV)
<i>Manager</i> . . . . .	J. P. Walwyn (Med. III)

## GYMNASIUM CLUB EXECUTIVE

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<i>Hon. Vice-President</i> . . . . .	G. R. Workman
<i>President</i> . . . . .	J. H. F. Adams (Med. V)
<i>Secretary</i> . . . . .	E. Chorolsky (Ap Sc III)
<i>Manager</i> . . . . .	I. W. Mix (Vic)

## GOLF CLUB EXECUTIVE

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<i>President</i> . . . . .	J. A. Sullivan (Med V)
<i>Secretary</i> . . . . .	J. C. Porter (U.C. III)

## BOXING, WRESTLING AND FENCING CLUB EXECUTIVE

<i>Hon. President</i> . . . . .	Dr. Gordon Cameron
<i>Hon. Vice-President</i> . . . . .	Dr. C. D. Gossage
<i>President</i> . . . . .	W. S. Martin (St. Michael's IV)
<i>Vice-President</i> . . . . .	E. B. Hubbard (Ap Sc IV)
<i>Secretary</i> . . . . .	J. F. Dreyer (Med V)
<i>Manager</i> . . . . .	L. W. Black (Med V)
<i>Boxing Representative</i> . . . . .	W. G. Carscadden (Med. VI)
<i>Wrestling Representative</i> . . . . .	J. F. Farnsworth (Med V)
<i>Fencing Representative</i> . . . . .	R. B. F. Barr (U.C. IV)

## CURLING CLUB EXECUTIVE

<i>Hon. President</i>	. . . . .	Prof. W. M. Treadgold
<i>President</i>	. . . . .	L. G. MacDonald (U.C. IV)
<i>Vice-President</i>	. . . . .	R. S. Mathison (U.C. III)
<i>Sec.-Treasurer</i>	. . . . .	T. M. Steele (Med. V)

## INDOOR BASEBALL CLUB EXECUTIVE

<i>President</i>	. . . . .	F. F. Hutchison (U. C. IV)
<i>Vice-President</i>	. . . . .	C. S. PATTERSON (Vic. III)
<i>Secretary</i>	. . . . .	G. S. Evans (U. C. II)
<i>Assistant Secretary</i>	. . . . .	G. A. Holden (Ap. Sc. II)

## LACROSSE CLUB EXECUTIVE

<i>Hon. President</i>	. . . . .	G. S. Williamson (Med. VI)
<i>President</i>	. . . . .	Hugh M. Ross (Med. V)
<i>Vice-President</i>	. . . . .	M. I. SPARKS (Med. V)
<i>Secretary</i>	. . . . .	W. R. Brunt (Vic. IV)
<i>Manager</i>	. . . . .	A. R. McGee (Med. V)

## GYMNASIA

The Physical Department has now five gymnasia. The main floor, 100 x 50 feet, is fitted up with the latest apparatus for all round class and individual work. The upper gymnasium, 80 x 40 feet, is known as the Games Room, where the interfaculty contests in basketball, indoor baseball and volley ball are played. The teams of the various faculties and colleges have practice hours allotted to them on this floor. There are also the three small gymnasia, each 50 x 30 feet, for boxing, wrestling and fencing, respectively. These three rooms are also fitted up with basketball goals and afford extra practice floors in an emergency.

All the male students of the University are examined by the Medical Director and placed in categories according to their physical fitness. Some form of physical training is compulsory for every student of the first and second years. Students in Category A<sup>1</sup>, that is physically fit, can elect the form of exercise in which they wish to engage. Students in Category A<sup>2</sup>, (hardly up to A<sup>1</sup> standard physically), can elect in the same manner, but are limited to certain forms of exercise as recommended by the Physical Director. Students in Category B<sup>1</sup> must take the form of exercise recommended by the Physical Director.

Two gymnasium instructors are in attendance from 9 a.m. to 6 p.m. Classes are held at various hours throughout the day. The

Swimming Instructor is in attendance at the pool from 9 a.m. to 6 p.m. Swimmers may use the pool at any time. Non-swimmers must attend at the hours set for them. Students may consult the Medical Director on all matters pertaining to their health.

The Gymnasium Fee is now merged in the Hart House Fee, payable to the Bursar, and compulsory for all male students.

### HART HOUSE THEATRE

<i>Director</i> , Bertram Forsyth.	<i>Business Manager</i> , R. S. Burns.
<i>Art Director</i> , Arthur Lasmer.	<i>Secretary</i> , E. O. Mitchell.
<i>Misses of Workshops</i> , Miss Jocelyn Taylor.	<i>Stage Manager</i> , C. Tait.

#### *Syndics*

Vincent Massey (Chairman)	Alice Vincent Massey.
J. B. Bickersteth.	W. S. Milne.
G. L. Keighley	Leslie Reid (Hon. Secretary).
George H. Locke.	G. Sparling.
G. F. McFarland (Hon. Treasurer)	

### MATHEMATICAL AND PHYSICAL SOCIETY.

<i>Honorary President</i> , M. A. Mackenzie, M.A., F. I. A.	<i>Corresponding Secretary</i> , Miss M. E. Wallace.
<i>President</i> , R. G. Stagg.	<i>Treasurer</i> , A. R. Turnbull.
<i>Vice-President</i> , W. G. MacArthur.	<i>Recording Secretary</i> , Miss M. E. Westman.

#### *Representatives*

<i>Graduate</i> , Miss B. M. Reid, B.A.	<i>Second Year</i> , Miss F. E. Sullivan.
<i>Fourth Year</i> , H. G. Hanley.	<i>First Year (Men's)</i> , G. E. Cannon.
<i>Third Year</i> , H. G. I. Watson.	<i>First Year (Women's)</i> , Miss W. M. Wallace.

### CHESS CLUB

<i>Honorary President</i> , Principal M. Hutton.	<i>President</i> , W. H. Coulter.
	<i>Secretary-Treasurer</i> , L. J. Harris.

### COMMERCE CLUB

<i>Honorary President</i> , Professor R. M. MacIver.	<i>Athletic Director</i> , J. H. Mitchell.
<i>President</i> , Professor H. A. Innis.	<i>Third Year Representative</i> , W. R. Carroll.
<i>1st Vice-President</i> , A. L. A. Richardson,	<i>Second Year Representatives</i> , J. H. Singlehurst, W. F. Thompson.
<i>2nd Vice-President</i> , R. W. Keast.	<i>First Year Representative</i> , A. A. Rennick.
<i>Secretary</i> , A. K. Booth.	
<i>Treasurer</i> , G. H. Rawson.	

## MENORAH SOCIETY

*President*, D. Garfunkel*Vice-President*, Miss S. Sher.*Treasurer*, S. Soskin*Recording Secretary*, Miss B. Bain.*Corresponding Secretary*, E. Lazaresco.*Executive*, Miss R. Rotenberg, S.

Greenberg, R. H. Breslin, B.

Grossberg, B. Weinberg, M.

Pusitz, H. Rotenberg, E. E.

Gelber, I. L. Kenen.

## WOMEN REPRESENTATIVES TO THE DEBATING UNION

*Trinity College*, Miss E. G. Gregory  
(*President*), Miss M. E. Dick.*University College*, Miss J. C.  
Stewart, Miss L. E. McBride.*St. Michael's College*, Miss M. C.*Victoria College*, Miss L. H. Cotton,  
Miss M. G. StinsonYates (*Secretary*), Miss M. W.  
Coughlin.

## UNIVERSITY OF TORONTO CHORAL SOCIETY

*Conductor*, Healey Willan, Mus.  
Doc.*Hon. President*, Prof. D. R. Keys,  
M.A.*President*, W. L. Fawcett.*Vice-President*, Miss M. H. Stevens.*Recording Secretary*, Miss R. M.  
Anderson*Corresponding Secretary*, C. R.  
Wray.*Treasurer*, Miss P. W. Mitchell*Business Manager*, A. W. Entwistle,  
B.A.*Advertising Manager*, D. E. Sander-  
son.*Librarians*, Miss K. P. Irwin, A. R.  
Turnbull.*Ex-Officio Members*, Miss M. E.  
Wallace, Miss A. M. B. Hamilton.*Representative from S.A.C.*, E. A.  
Beecroft

## HONOUR SCIENCE CLUB

*Hon. President*, Professor J. Satterly, M.A., D.Sc.*President*, C. A. Brownson.*Vice-President*, Miss M. E. Bone.*Secretary*, Miss D. Glaister.*Treasurer*, R. K. Magee.*Year Representatives, Third Year*  
Miss M. S. McCready, L. A.Smith, *First Year*, Miss I. R.  
Hogg, F. J. Giffen.

## THE GERMAN CLUB

*President*, S. L. Sumberg, B.A.*Vice-President*, Miss J. E. Lyall.*Secretary*, Miss J. B. Elliot.*Librarian*, Miss D. E. Elliott.

## UNIVERSITY COLLEGE STUDENT SOCIETIES.

UNIVERSITY COLLEGE STUDENT CHRISTIAN  
ASSOCIATION*Officers*

<i>President</i> , G. P. McLeod.	<i>Secretary</i> , W. S. Taylor
<i>Vice-President</i> , F. W. Beare.	<i>Treasurer</i> , G. A. Wishart

*Convenors*

<i>Study Group</i> , W. E. MacDonald.	<i>Missionary</i> , H. G. Hall.
<i>Boys' Work</i> , G. D. F. Kendell.	<i>Publicity</i> , W. R. Turner.

## WOMEN'S STUDENT CHRISTIAN ASSOCIATION

<i>President</i> , Miss O. I. Hetherington.	<i>Treasurer</i> , Miss B. Abbott.
<i>Secretary</i> , Miss A. Mitchell.	<i>Bible Study Group Convenor</i> , Miss A. Mayhew.

*Year Representatives*

<i>Third Year</i> , Miss M. Clark	<i>Second Year</i> , Miss K. Aggett.
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## LITERARY AND ATHLETIC SOCIETY

<i>President</i> , D. M. Gowdy.	<i>Secretary</i> , A. C. Hall.
<i>First Vice-President</i> , B. R. Walker.	<i>Treasurer</i> , C. W. Stollery.
<i>Second Vice-President</i> , E. G. Smith.	<i>Asst. Secretary</i> , T. F. Moore.

*Year Representatives*

<i>Fourth Year</i> , D. J. Cuddy.	<i>Second Year</i> , C. M. King
<i>Third Year</i> , G. N. Cook.	<i>First Year</i> , A. T. Christie

## WOMEN'S LITERARY SOCIETY

<i>Hon. President</i> , Miss A. Lobb, B.A. (Oxon.), M.A.	<i>Treasurer</i> , Miss L. S. Perrott.
<i>President</i> , Miss V. G. Gilfillan	<i>Year Representatives</i> , <i>Fourth Year</i> , Miss E. Wallace. <i>Third Year</i> , Miss R. M. Anderson; <i>Second</i> <i>Year</i> , Miss F. M. Stinson, <i>First</i> <i>Year</i> , Miss M. R. Eoll
<i>Vice-President</i> , Miss A. E. Mayhew.	
<i>Rec. Secretary</i> , Miss M. A. B. Black	
<i>Cor. Secretary</i> , Miss A. M. McCrary.	

## WOMEN'S UNDERGRADUATE ASSOCIATION

<i>Hon. President</i> , Mrs J. E. Shaw.	<i>President of First Year</i> , Miss C. V. L. Scholes.
<i>President</i> , Miss R. C. Harris.	<i>Representative of Women's Literary Society</i> , Miss V. G. Gilfillan.
<i>Vice-President</i> , Miss H. M. Mac-lennan.	<i>Representative of Student Christian Association</i> , Miss O. I. Hetherington.
<i>Secretary</i> , Miss G. R. Graham.	<i>Representative of Queen's Hall</i> , Miss E. D. Robertson.
<i>Treasurer</i> , Miss O. J. Scott.	<i>Representative of U. C. Women's Residences</i> , Miss F. I. Nichol.
<i>President of Fourth Year</i> , Miss D. M. Rogers.	<i>Representative of Social Service</i> , Miss M. K. Hartwick.
<i>President of Third Year</i> , Miss K. L. Ball.	
<i>President of Second Year</i> , Miss L. F. Tudhope.	

## CLASS SOCIETIES

*Fourth Year (Men)*

<i>President</i> , D. J. Cuddy.	<i>S.A.C. Representative</i> , W. B. Bate.
<i>Secretary</i> , G. E. Hill.	<i>Torontonensis Representative</i> , L. D. Reid.
<i>Treasurer</i> , J. M. Brady.	

*Fourth Year (Women)*

<i>President</i> , Miss D. M. Rogers.	<i>Treasurer</i> , Miss L. I. Morwick.
<i>Vice-President</i> , Miss M. V. Wallace.	<i>S.A.C. Representative</i> , Miss E. G. Armstrong.
<i>Secretary</i> , Miss P. A. Ross.	

*Permanent Executive*

<i>President</i> , W. C. Harris.	<i>Vice-President</i> , Miss R. C. Harris.
<i>Secretary-Treasurer</i> , A. S. Matthews.	<i>Asst. Secretary-Treasurer</i> , Miss J. D. Reading.

*Third Year (Men)*

<i>President</i> , G. N. Cook.	<i>Treasurer</i> , A. C. Scott.
<i>Secretary</i> , L. L. Francis.	<i>S.A.C. Representative</i> , A. T. Van Every.

*Third Year (Women)*

<i>President</i> , Miss K. L. Ball.	<i>Treasurer</i> , Miss M. W. Craw.
<i>Vice-President</i> , Miss O. J. Scott.	<i>S.A.C. Representative</i> , Miss I. E. Pattison.
<i>Secretary</i> , Miss J. L. C. Malcolm.	

*Second Year (Men)*

<i>President</i> , C. M. King.	<i>Treasurer</i> , G. L. Jennison.
<i>Secretary</i> , K. D. M. Spence.	<i>S.A.C. Representative</i> , J. H. Stewart.

*Second Year (Women)*

<i>President</i> , Miss L. F. Tudhope	<i>Secretary</i> , Miss D. F. Harding.
<i>Vice-President</i> , Miss M. E. Thompson.	<i>Treasurer</i> , Miss E. T. Beauregard
	<i>S.A.C. Representative</i> , Miss J. Klotz

*First Year (Men)*

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<i>Debating Club Representative</i> .....	A. D. Turnbull
<i>Athletic Association Representative</i> .....	A. W. Jeckell
<i>Architectural Club Representative</i> .....	W. H. Steele

The Society meets every second Wednesday during the academic year (except April), beginning with the second Wednesday in October. Addresses are given by prominent men on subjects of general interest.

The Society is divided into six clubs for the purpose of affording a medium of study of matters relating in particular to different branches of Engineering. Each of the Clubs holds its meetings at regular intervals. Papers are read and discussions held on engineering subjects.

The Society publishes an annual, called "Transactions," which contains the addresses given at the meetings and an account of the year's activities.

A Supply Department is conducted by the Society on a co-operative plan, through which instruments, draughting supplies, stationery, etc., can be purchased at a low cost.

## ATHLETIC ASSOCIATION

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<i>President.....</i>	A. W. Jeckell
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<i>Third Year Representative..</i>	C. A. Pollock
<i>Second Year Representative. ..</i>	G. B. Smith
<i>First Year Representative..</i>	D. J. McKenzie

The Athletic Association has full control over all athletic clubs using the name of the Faculty of Applied Science. The Executive Committee has power to suspend any one from the privileges of membership in the Association for any breach of its regulations, and controls the finances of all athletic clubs in the aforesaid Faculty. The annual membership fee of this Association is one dollar.

No other moneys are collected for the support of athletics in the Faculty of Applied Science without the sanction of the Executive Committee.

## DEBATING CLUB

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<i>Chairman.....</i>	A. D. Turnbull
<i>Vice-Chairman.....</i>	J. H. Ings
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<i>Second Year Representative .....</i>	G. L. Delaplane
<i>First Year Representative.....</i>	V. G. Loscombe

The Debating Club exists for the purpose of helping students to overcome their natural embarrassment when speaking in public and to that end holds weekly meetings during both terms, at which open debates take place after the manner of the Oxford Union.

## THE INDUSTRIAL CHEMICAL CLUB

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<i>Chairman .....</i>	A. D. Morton
<i>Vice-Chairman. ....</i>	J. D. Hawken
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<i>Fourth Year Representative.....</i>	R. S. Kerr
<i>Third Year Representative...</i>	C. W. Witherell
<i>Second Year Representative .</i>	R. E. Richardson
<i>First Year Representative.....</i>	C. F. Burk

The object of the Chemical Club is to promote the study of industrial chemistry and chemical engineering. Illustrated lectures, preceded by an informal dinner and a short musical programme, are held fortnightly, and on the following day an excursion is made to industrial concerns located in the city or vicinity.

### MECHANICAL AND ELECTRICAL ENGINEERING CLUB

*Hon. Chairman* .... .. Prof. R. W. Angus

*Hon. Vice-Chairmen*

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*Vice-Chairman (Mechanical)* ... F. W. Watson

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*Second Year Representatives* ..... J. E. Howell, J. K. Gardner

*First Year Representatives* ..... H. T. Pritchard, J. H. P. Russell

The Club meets every Thursday during the academic year for the discussion of papers relating to mechanical and electrical engineering problems.

### CIVIL ENGINEERING CLUB

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The Club is addressed during the academic year by practising engineers on modern methods and problems in civil engineering.

### MINING AND METALLURGICAL CLUB

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*Chairman Entertainment Committee*... L. M. Browne

The Club is the official organization representing the undergraduates of Departments 2 and 8 of the Faculty of Applied Science

The objects of the Club are to promote the spirit of good fellowship and mutual assistance amongst its members, both graduate and undergraduate, to provide a means of meeting together, and for the discussion of pertinent topics.

### ARCHITECTURAL CLUB

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### STUDENT CHRISTIAN ASSOCIATION

The Student Christian Association now carries on the work commenced by the Young Men's Christian Association in this Faculty in 1905. The aims of the Association are to develop true Christian manhood and to be of assistance to students. Bible study groups are conducted, conferences arranged and students are given help in finding suitable rooms, etc.

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